

**HALDIMAND AND NORFOLK  
COMMUNITY HEALTH STATUS REPORT  
UPDATE**

**Vital Statistics - Live Births 1998-2000  
Lifestyle and Health Behaviours 2001/02  
Morbidity/Hospital Separations 1999/00-2001/02 and 2002/03  
Vital Statistics – Deaths and Leading Causes of Mortality 1998-2001**

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## INTRODUCTION

The *Haldimand and Norfolk Community Health Status Report (CHSR) Update 2004* builds on the *2002 Haldimand and Norfolk Community Health Status Report (CHSR)*, which was produced jointly by the Haldimand-Norfolk Health Unit and the Grand River District Health Council. This report is intended to serve as a resource to health and social service agencies, providing information on the health and health determinants of Haldimand and Norfolk Counties residents. It will be useful to individuals and organizations that plan, deliver, and evaluate health and related services in Haldimand and Norfolk Counties.

The Haldimand and Norfolk CHSR Update 2004 is largely a technical document providing data and its interpretation as it applies to the health status of the residents of Haldimand and Norfolk Counties; the factors that affect health, as well as health system service utilization. This report contains chapters focusing on non-medical determinants of health, as well as the leading causes of morbidity (disease) and mortality (death). As well, information on Vital Statistics (Births and Deaths) is also provided. The data are analyzed by age and sex, and are compared to all of Ontario where possible.

The following three sections are designed to assist the reader in putting the report into the context of the determinants of health and to understand the terms, data sources and statistics used for interpretation of the findings.

Part I.       **THE HEALTH DETERMINANTS CONTEXT**

Part II.       **DEFINITION OF TERMS**

Part III.      **INTERPRETATION OF THE DATA**  
                  **(Data Sources and Analyses)**

Part I. provides a brief description of the key determinants of health and how they interact with each other and affect the health status of the individual and the community in general (refer to Fig. A). This report contains many graphs and descriptions of the causes of morbidity and mortality along with information on the prevalence of health risk behaviours in Haldimand and Norfolk Counties. Often, more than one piece of information is required in order to appreciate the impact of one of these descriptors on the health of the residents of Haldimand and Norfolk Counties.

Part II. provides definitions of the many terms used throughout this report. Under *Statistical and Analytical Terms*, the primary measures of morbidity and mortality (e.g.,

Hospital Separations), as well as the analytical terms used to describe morbidity and mortality and to compare Haldimand and Norfolk Counties to Ontario, are defined. Under *Disease Categories*, the terms used to label the leading causes of morbidity and mortality are specified, along with their corresponding diagnostic codes from the International Classification of Diseases (ICD-9).

In the fiscal year 2002/03, morbidity and mortality data begun to be coded using International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Canada ICD-10-CA. Due to this change in coding, data and its interpretation will be provided as a three-year average for fiscal years 1999/00 to 2001/02 using ICD-9 codes, and fiscal year 2002/03 using ICD-10-CA codes.

Part III. provides a discussion of key points necessary for consideration when reading the report and interpreting/applying the information within it. This section provides a list of the data sources used for each chapter and any limitations that need to be considered with respect to the data contained therein.

## **Part I: THE HEALTH DETERMINANTS CONTEXT**

As health is not merely the absence of disease or infirmity, we encourage consideration of health from a broader perspective. Each determinant of health on its own, or through complex interactions with other determinants, influences an individual's health and health-related behaviours (Fig. A). Consideration of the determinants of health can provide insight into issues related to the health of an individual or population. With this insight, it may be possible to have a broader perspective and see that some aspects of health often extend beyond the health sector.

*Genetic endowment* is one key determinant of health. It is the basic biology and organic make-up of the individual, which thereby predisposes the individual to certain diseases or health problems<sup>1</sup>.

An individual's *social environment* extends from one's family and friends to the broader community. Support from families, friends and communities is important in times of stress, the attainment of basic prerequisites of health (such as food, housing, clothing), and a sense of well-being which seems to help in dealing with health problems.

The *physical environment* refers to the quality of air, water, food and soil. And, in the sense of the built environment, it pertains to housing, indoor air quality, the design of communities and transportation system. All of these factors can significantly influence our physical and psychological well-being. At certain levels of exposure, contaminants

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<sup>1</sup> Federal, Provincial and Territorial Advisory Committee on Population Health. *Toward a Healthy Future: Second Report on the Health of Canadians*. Prepared for the Meeting of Ministers of Health, Charlottetown, P.E.I., September 1999. Ottawa: Minister of Public Works and Government Services Canada, 1999.

in air, water, food and soil can cause a variety of adverse health effects including cancer, birth defects, respiratory illnesses and gastrointestinal ailments<sup>1</sup>.

Poverty is another important determinant of health related to *income status*. It has been shown that health status improves at each step up the income and social hierarchy<sup>1</sup>. Higher income determines things such as safe living conditions and the ability to buy sufficient good food. Social status, which tends to be linked to income, affects health by determining the degree of control people have over life circumstances and their capacity to take action on their health or conditions potentially influencing their health.

*Education* is one of the key components of socioeconomic status and is positively associated with health status and health behaviours. It has been found that health status improves with level of education. Education contributes to health and prosperity by equipping people with knowledge and skills for problem solving, and helps provide a sense of control and mastery over life circumstances<sup>1</sup>. Furthermore, education may increase opportunities for employment and income security and equip people with the skills necessary to access and understand information and other resources required to maintain or improve their health.

*Unemployment*, underemployment, stressful or unsafe work are associated with poorer health. An individual's physical, mental and social health is affected by their employment status which not only provides money but also a sense of identity, purpose, social contacts and opportunities for personal growth<sup>1</sup>.

Finally, *health services* are designed to promote, maintain or regain health and prevent disease and injury, and contribute to population health<sup>1</sup>. Access to these services is guided by personal health behaviours and choices, however access to health services is a determinant of health. Lack of access can impact negatively on health and yet may reflect structural problems in the health care system that are outside individual control.

For Haldimand and Norfolk **Demographics**, refer to the **Community Profiles Report** available on the GRDHC web site ([www.grdhc.on.ca](http://www.grdhc.on.ca)).

The **Vital Statistics – Births** section of the report summarizes the number of births by year, where the births took place by county, mother's age group and marital status, as well as some key details pertaining to the duration and type of pregnancy and baby's birth weight.

Other health determinants that play a key role in the health status of an individual are the health risk behaviours, or lifestyle factors, which are addressed in the **Health and Lifestyle Chapter**. These are modifiable risk factors that also, on their own or in an interplay with other factors, have an impact on the health status of the individual. The information on these factors is meant to assist health promotion planners in their efforts to design and target their health promotion activities at the at-risk populations and at those risk factors that are most prevalent and influential on the health status of the

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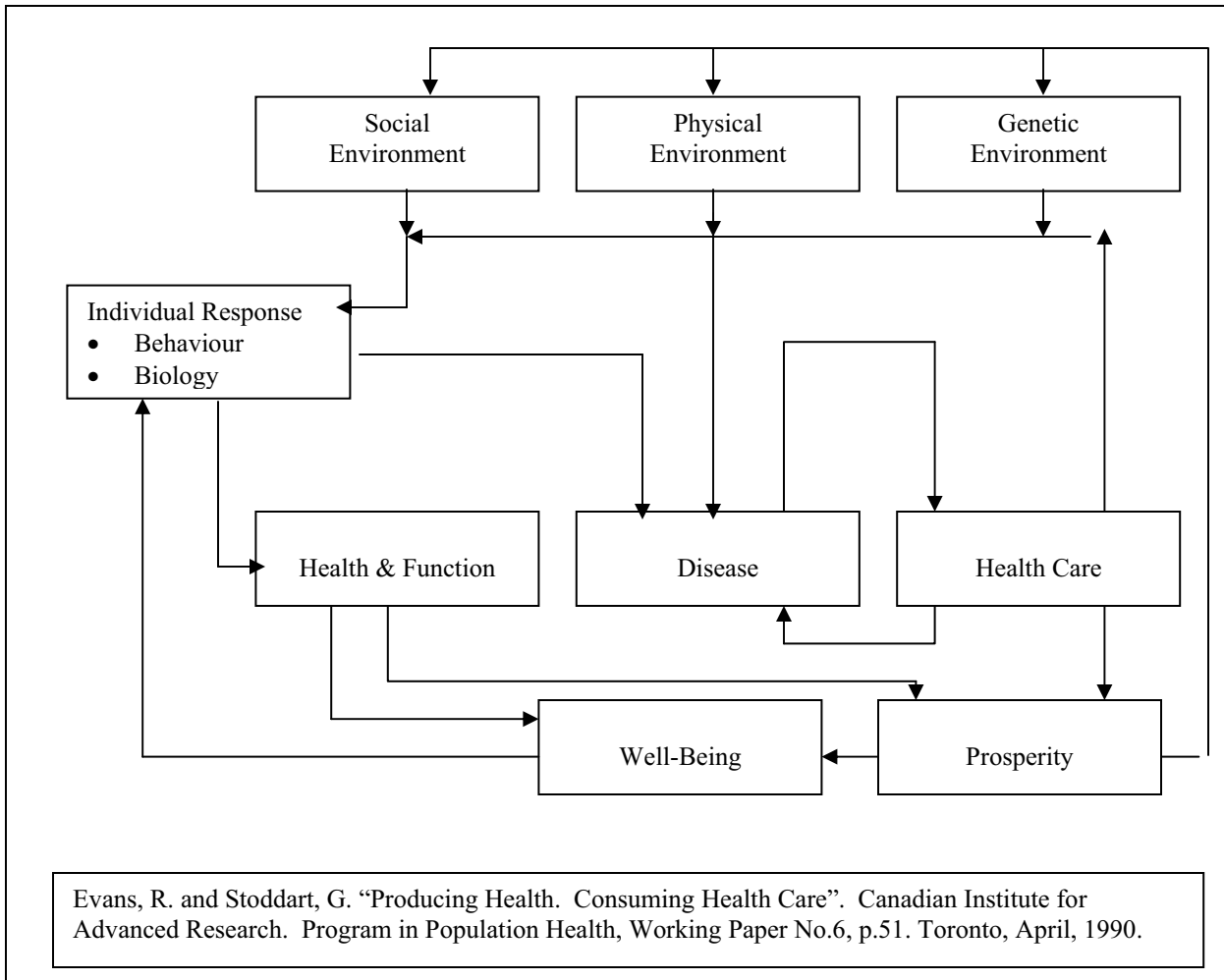
Ibid

residents of Haldimand and Norfolk Counties. Where the quality of the survey data does not allow for the release of the estimates due to high sampling variability, such estimates will not be shown but rather suppressed with the use of a dash (-). Comparisons to Ontario will be provided where available.

The leading causes of hospitalization are addressed in the **Morbidity Chapter**. Age and sex-specific causes are identified to assist in the planning and implementation of programs geared to reduce the incidence of these causes. Furthermore, this information highlights the utilization of the health care system.

The **Mortality Chapter** concludes the report and highlights the number of deaths by year, age and sex, and where the death occurred. In addition, the leading causes of death are summarized by year.

**Fig. A: The Determinants of Health Model**



**Part II: DEFINITION OF TERMS**

**Statistical and Analytical Terms**

TERM USED	DEFINITION
Age-specific Rate	A rate for a specified age group. The numerator and denominator refer to the same age group. The multiplier (i.e., 1,000 or 100,000) is chosen to produce a rate that can be expressed as a convenient number.
Age Standardization	A procedure for adjusting rates, e.g., death rates, designed to minimize the effects of differences in age composition when comparing rates for different populations.
Confidence Interval (CI)	The computed interval with a given probability, e.g., 95%, that the true value of a variable such as a mean, proportion, rate, or ratio is contained within the interval.
Confidence Limits (LCI) (UCI)	The computed interval with a given probability, e.g., 95%, that the true value of a variable such as a mean, proportion, rate, or ratio is contained within the interval. <i>LCI and UCI</i> – the lower boundary/limit and upper boundary/limit of the confidence interval.
Deaths (Mortality)	Death data (mortality) is based on death certificates, which note the immediate cause of death and the underlying causes of death. The <i>causes of death</i> are all those diseases, morbid conditions, or injuries that either resulted in or contributed to death and the circumstances of the accident or violence which produced any such injuries. The <i>underlying cause of death</i> is 1) the disease or injury that initiated the train of events leading to death or 2) the circumstances of the accident or violence that produced the fatal injury.
Hospital Separations (Hospitalization) – (Morbidity)	A hospital separation is a discharge or transfer from a hospital, or a death that occurs in a hospital. Separations are a data source used to provide an indicator of the extent of disease and illness (morbidity) in a community. Separations refer to the number of episodes and not the number of people treated.
Potential Years of Life Lost (PYLL) (Premature Mortality)	A measure of the relative impact of various diseases and lethal forces on society. PYLL highlights the loss to society as a result of youthful or early deaths. The figure for potential years or life lost due to a particular cause is the sum, over all persons dying from that cause, of the years that these persons would have lived had they experienced normal life expectation (i.e. lived to the age of 75).
Standardized Morbidity / Hospitalization Ratio (SMR or SHR)	The ratio of the number of hospital separations observed in Haldimand and Norfolk Counties to the number that would be expected if Haldimand and Norfolk Counties had the same specific rates as Ontario (multiplied by 100). If the confidence interval around the ratio includes the value of 1.0, then the two rates do not differ. Otherwise, the differences are statistically significant.
Standardized Mortality Ratio (SMR)	The ratios of the number of deaths observed in Haldimand and Norfolk Counties to the number that would be expected if Haldimand and Norfolk Counties had the same specific rates as Ontario (multiplied by 100). If the confidence interval around the ratio includes the value of 1.0, then the two rates do not differ. Otherwise, the differences are statistically significant.
Statistically Significant Difference	Tests of statistical significance are used to determine whether differences in point estimates, proportions or rates exist between populations. Since point estimates are affected by the manner in which they are determined, such as sample size in surveys, tests of statistical significance focus on the degree of variance around the point estimate.

## Disease Categories

The disease categories, used to describe the leading causes of morbidity and mortality, are based upon the International Classification of Diseases (Ninth Revision), commonly referred to as ICD-9. The various disease categories (ICD-9 Chapters), disease groupings (clusters of ICD-9 codes), and specific causes (ICD-9 code) as they are discussed in the report, are outlined below.

Term Used	ICD-9 Chapter (ICD-9 codes), ICD-9 Grouping and (Specific ICD-9 Code)
Infectious Diseases	I. Infectious and Parasitic Diseases (1-139)
AIDS	Polymyelitis and other non-arthropod-borne viral diseases of central nervous system (42-44)
Neoplasms/Cancers	II. Neoplasms (140-239) - All malignant and benign neoplasms
Oral cancer	Malignant neoplasm of lip, oral cavity and pharynx (140-149)
Stomach cancer	Malignant neoplasm of digestive organs and peritoneum (151)
Colorectal cancer	Malignant neoplasms of digestive organs and peritoneum (153-154)
Liver cancer	Malignant neoplasms of digestive organs and peritoneum (155)
Lung, Trachea, Bronchus cancer	Malignant neoplasms of respiratory and intrathoracic organs (162)
Skin cancer	Malignant neoplasm of bone, connective tissue, skin and breast (172-173)
Breast (female) cancer	Malignant neoplasm of bone, connective tissue, skin and breast (174)
Uterine cancer	Malignant neoplasm of genitourinary organs (179, 182)
Cervical cancer	Malignant neoplasm of genitourinary organs (180)
Prostate cancer	Malignant neoplasm of genitourinary organs (185)
Bladder cancer	Malignant neoplasm of genitourinary organs (188)
Lymphatic/haematopoietic cancer	Malignant neoplasm of lymphatic and haematopoietic tissue (200-204)
Leukemia	Malignant neoplasm of lymphatic and haematopoietic tissue (204-208)
Benign	Benign neoplasms (210-229)

**HALDIMAND AND NORFOLK COMMUNITY HEALTH STATUS REPORT UPDATE 2004**

<b>Term Used</b>	<b>ICD-9 Chapter (ICD-9 codes), ICD-9 Grouping and (Specific ICD-9 Code)</b>
Endocrine, Nutritional and Metabolic Diseases and Immunity Disorders	III. Endocrine, Nutritional and Metabolic Diseases and Immunity Disorders (240-279)
Metabolic and Immunity Disorders	Other metabolic disorders and immunity disorders (270-279)
Diabetes/Diabetes Mellitus	Diseases of endocrine glands (250)
Blood Disorders	IV. Diseases of Blood and Blood-Forming Organs (280-289)
Mental Disorders	V. Mental Disorders (290-319)
Psychoses / Organic Psychotic Conditions	Organic psychotic conditions and other psychoses (290-299)
Schizophrenic psychoses	Other Psychoses (295-299)
Neurotic Disorders	Neurotic disorders, personality disorders and other nonpsychotic mental disorders (300)
Personality Disorders	Neurotic disorders, personality disorders and other nonpsychotic mental disorders (301)
Alcohol Dependence Syndrome	Neurotic disorders, personality disorders and other nonpsychotic mental disorders (303)
Drug Dependence	Neurotic disorders, personality disorders and other nonpsychotic mental disorders (304)
Depression	Neurotic disorders, personality disorders and other nonpsychotic mental disorders (311)
Diseases of the Nervous System	VI. Diseases of the Nervous System and Sense Organs (320-389)
Circulatory Diseases	VII. Diseases of the Circulatory System (390-459)
Hypertension	Hypertensive Disease (401-405)
All Ischaemic Diseases	Ischaemic heart disease (410-414)
Heart Attack	Acute myocardial infarction (410)
Non-ischaemic heart disease	Other forms of heart disease (420-429)
Other Heart Disease	Acute rheumatic fever (390-392), Chronic rheumatic heart disease (393-398), Diseases of pulmonary circulation (415-417), Other forms of heart disease (not including those categories listed above) (420-429)
Stroke	Cerebrovascular disease (430-438)
Artery Disease	Disease of arteries, arterioles and capillaries (440-448)



Term Used	ICD-9 Chapter (ICD-9 codes), ICD-9 Grouping and (Specific ICD-9 Code)
Vein Disease	Diseases of veins and lymphatics, and other diseases of circulatory system (451-459)
Respiratory Diseases	VIII. Diseases of the Respiratory System (460-519)
Acute Respiratory Infections	Acute respiratory infections (460-466)
Pneumonia	Pneumonia and Influenza (480-486)
Influenza	(487)
COPD	Chronic obstructive pulmonary disease (490-496) – includes asthma
Asthma	(493)
Digestive Diseases	IX. Diseases of the Digestive System (520-579)
Diseases of oral cavity, salivary glands and jaws	(520-529)
Diseases of oesophagus, stomach and duodenum	(530-537)
Hernia of abdominal cavity	(550-553)
Appendicitis	(540-543)
Noninfective enteritis and colitis	(555-558)
Other disease of intestines and peritoneum	(560-569)
Other diseases of the digestive system	(570-579)
Chronic Liver Disease and Cirrhosis	(571)
Genitourinary Diseases	X. Diseases of the Genitourinary System (580-629)
Other diseases of urinary system	(590-599)
Other disorders of female genital tract	(617-629)
Pregnancy and Childbirth	XI. Complications of Pregnancy, Childbirth and the Puerperium (630-679)
Normal Delivery	Delivery in a completely normal case (650)

**HALDIMAND AND NORFOLK COMMUNITY HEALTH STATUS REPORT UPDATE 2004**

<b>Term Used</b>	<b>ICD-9 Chapter (ICD-9 codes), ICD-9 Grouping and (Specific ICD-9 Code)</b>
Skin Diseases	XII. Diseases of the Skin and Subcutaneous Tissue (680-709)
Musculoskeletal Disorders	XIII. Diseases of the Musculoskeletal System and Connective Tissue (710-739)
Arthropathies	Arthropathies and related disorders (710-719)
Congenital Anomalies	XIV. Congenital Anomalies (740-759)
Perinatal Conditions	XV. Certain Conditions Originating in the Perinatal Period (760-779)
Ill-Defined	XVI. Symptoms, Signs and Ill-Defined Conditions (780-799)
Injuries	XVII. Injury and Poisoning (800-999)
Fractures/Dislocation	Fracture of the: skull (800-804); spine and trunk (805-809); upper limb (810-819); lower limb (820-829)
Head Injury/Intracranial injury	Intracranial injury, excluding those with skull fracture (850-854)
Burns	Burns (940-949)
Poisoning	Poisoning by drugs, medicaments and biological substances (960-979)
MVA	Motor vehicle non-traffic accidents (E820-825)
Transport Accidents	Railway accidents, other road vehicle accidents, water transport accidents, air and space transport accidents, vehicle accidents not elsewhere classified (E800-807, E826-848)
Bicycle Accidents	Pedal Cycle accidents (E826)
Accidental Poisoning	Accidental poisoning by drugs, medicaments and biological substances; accidental poisoning by other solid and liquid substances, gases and vapours (E850-869)
Falls	Accidental falls (E880-888)
Other Accidents	Accidents caused by fire and flames; accidents due to natural and environmental factors; accidents caused by submersion, suffocation and foreign bodies, and other accidents (E890-928)
Suicide	Suicide and self-inflicted injury (E950-959)
Homicide and injury on others	Homicide and injury purposely inflicted by other persons (E960-969)
Complications of surgical and medical care not elsewhere specified	996-999

### Disease Categories – International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Canada (ICD-10-CA)

The disease categories, used to describe the leading causes of morbidity and mortality, are based upon the ICD-10-CA. The various disease classifications (ICD-10-CA Chapters), as they are discussed in the report, are outlined below.

ICD-10 Codes	ICD-10 Chapter Label
A00-B99	1. Certain Infectious and Parasitic Diseases
C00-D48	2. Neoplasms
D50-D89	3. Diseases of the Blood and Blood-forming Organs and certain disorders involving the immune system
E00-E90	4. Endocrine, Nutritional and Metabolic Diseases
F00-F99	5. Mental and Behavioural Disorders
G00-G99	6. Diseases of the Nervous System
H00-H59	7. Diseases of the Eye and Adnexa
H60-H59	8. Diseases of the Ear and Mastoid Process
I00-I99	9. Diseases of the Circulatory System
J00-J99	10. Diseases of the respiratory system
K00-K93	11. Diseases of the Digestive System
L00-L99	12. Diseases of the Skin and Subcutaneous Tissue
M00-M99	13. Diseases of the Musculoskeletal System and Connective Tissue
N00-N99	14. Diseases of the Genitourinary System
O00-O99	15. Pregnancy, Childbirth and the Puerperium
P00-P96	16. Certain conditions originating in the perinatal period
Q00-Q99	17. Congenital malformations, deformations and chromosomal abnormalities
R00-R99	18. Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified
S00-T98	19. Injury, poisoning and certain other consequences of external causes
V01-Y98	20. External causes of morbidity and mortality
Z00-Z99	21. Factors influencing health status and contact with health services

### Part III: INTERPRETATION OF THE DATA (Data Sources and Analyses)

#### 1) Birth Data

- a. The data on births were obtained from the Provincial Health Planning Database of the Ministry of Health and Long-Term Care (MoHLTC). It pertains to live births only and includes all births to Haldimand and Norfolk mothers (i.e. resident of Haldimand and Norfolk Counties), regardless of where the birth occurred. For example, if a Haldimand or Norfolk mother gave birth in a Hamilton hospital, this birth would be captured under Haldimand and Norfolk statistics. Analysis of where the birth occurred is also provided. This update report covers the calendar years 1998-2001.

#### 2) Lifestyles and Health Risk Behaviours Data

- a. The information on *lifestyles and health risk behaviours* was obtained from the Canadian Communities Health Survey (CCHS) conducted in 2000-2001. Aboriginal population was not included in the sampling for the CCHS.

#### 3) Morbidity/Hospital Separations Data

- a. Data for the *Hospital Separations* section of this Update Report were obtained from the Provincial Health Planning Database (MoHLTC, 2004). It should be noted that as of 2002 all data is now coded using International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Canada ICD-10-CA. Due to the changes in coding, data for the years 1999-2001 is summarized as a three-year average. Whereas, data for 2002 is presented on its own. Given the relative newness of this coding practice, data analysis is limited to key highlights for the purposes of this update report.
- b. All hospital separation data are classified according to patient residence, not location where the patient was hospitalized. For example, if a Haldimand or Norfolk resident was hospitalized in Hamilton-Wentworth - s/he was included in the Haldimand and Norfolk Counties statistics.
- c. Residents of Six Nations of the Grand River Territory and Mississaugas of the New Credit First Nation are included in the Haldimand and Norfolk Counties morbidity data because residents from these federal territories often use the Haldimand and Norfolk Counties hospitals.
- d. Hospital separation statistics (morbidity) do not describe the true morbidity rates of a population, because these data are based on hospital discharges, which

only include individuals who were hospitalized or died in a hospital. Many conditions do not require hospitalization and would therefore not be captured by hospital discharge reports. As well, changing patterns of health care practice can affect hospitalization for various medical conditions (i.e. the use of ambulatory clinics, services provided by the Community Care Access Centre). However, these data are the standardized morbidity indicators currently collected and available for comparisons with other regions and the province. In the near future, the National Ambulatory Care Reporting System will make available data on ambulatory clinic utilization which will provide additional information on patients seeking medical interventions and care outside of in-patient hospital care.

#### **4) Mortality Data**

- a. The data on deaths were obtained from the Provincial Health Planning Database (MoHLTC, 2004). This update report covers the calendar years 1998-2001.
- b. All *Mortality* data are classified according to patient residence, not location where the patient died. For example, if a Haldimand or Norfolk resident died in Brant County s/he is included with the Haldimand and Norfolk statistics. Analysis of where the deaths occurred is also provided.
- c. Residents of Six Nations of the Grand River Territory and Mississaugas of the New Credit First Nation are included in the Haldimand and Norfolk mortality data.
- d. The causes of death described in this report do not account for contributing conditions, but only the primary causes. For example, if an individual with chronic obstructive pulmonary disease died of a myocardial infarction (heart attack), the heart attack was included in this chapter as the primary cause of death. Nevertheless, the primary causes of death are indicative of the health of the community, and are particularly useful when making comparisons with other communities, or with the province as a whole.

#### **5) Comparisons over Time**

- a. The data in this report cover the time period of 1998 to 2002, depending on the type of data. While Morbidity data, particularly hospital separations data, is available for the fiscal year 2002/03 – mortality data covers the years of 1998 to 2001. The focus of the analyses in this update report is on the most recent year for which data was available. The hospital separation data is presented as a three-year average for the fiscal years 1999/00 – 2001/02 (using ICD-9 classification of disease) and for the most recent year 2002/03 on its own (using ICD-10-CA classification of disease).

- b. In order to make comparisons with years previous to 1998, other sources will need to be used. The primary source of data prior to 1998 include the first Haldimand-Norfolk Health Status Data Report released in 1993 and the 2002 Haldimand and Norfolk Community Health Status Report released in June of that year. Note that, when using other reports to make comparisons it is essential to ensure that the denominators are the same. That is, are rates based on 1,000 people in one report and 100,000 in another? Are rates based on one year in one report, versus three year averages in another? Has there been a change in the definition of a condition between the reports, such as a “*preterm birth*” defined as ‘a birth at 34 weeks or less gestation’ versus 36 weeks? It is imperative that the data in these reports be examined and compared carefully when looking at timelines that cross more than one report.

## **6) Data Analysis**

- a. When interpreting the leading causes of morbidity and mortality in Haldimand and Norfolk Counties, it is important to note that the relative proportion of each cause may or may not exceed the provincial proportion. In order to understand how Haldimand and Norfolk Counties compares to the Province, age-adjusted comparisons are needed. Broad comparisons over all age groups require a statistical adjustment for the distribution of the various age groups in the two populations being compared. Without this adjustment, morbidity and mortality rates may differ simply because of the differences in the age composition of each population. The standardized hospitalization/morbidity ratio and the standardized mortality ratio (referred to as SHR and SMR, respectively in this report) are used to control for differences in the age composition of the populations. The method of deriving an SHR/SMR is referred to as ‘indirect standardization’, and is the preferred approach to adjusting for age and sex differences in populations when comparing a smaller geographic area (e.g. Haldimand and Norfolk Counties) to a larger more encompassing boundary (e.g. Ontario). Confidence intervals are also calculated for SHR/SMRs to test for statistical significance.
- b. Statistical significance is discussed whenever means, rates or proportions are compared, or when using SHR/SMR, in order to understand whether the difference observed in the numbers is large enough to be considered a reliable difference between the populations (i.e., Haldimand and Norfolk vs. Ontario, males vs females, etc.). One should not accept an observed difference in means, proportions, rates, or ratios as a true population difference unless it is statistically significant. Some differences are an artifact of sampling, including many of those observed in the Canadian Communities Health Survey, which after statistical analysis are revealed not to differ significantly. Tests for statistical significance help us to understand whether findings would occur repeatedly, under similar circumstances. In some cases, confidence intervals are discussed (95% CI), while in other cases, statistical significance is indicated in graphs and text without presenting the upper and lower limits on the 95% CI.

- c. Age-standardized (standardized to the 1991 Canadian population) and age-specific rates are presented in the appendices, allowing for further comparisons to other geographic locations, such as other health planning areas. The approach of age-standardizing - adjusting for differences in the age and sex composition of distinct populations by applying the rates to a standard population, such as Canada in 1991 - is known as 'direct standardization'. Neither the direct, or indirect standardization approach gives a true representation of the extent of morbidity and mortality in the community.
  
- d. Both the SHR/SMRs and the leading causes of morbidity and mortality are required in order to understand the complete picture of morbidity and mortality. While the SHR/SMRs are useful for determining differences between Haldimand and Norfolk Counties and Ontario, the actual numbers of hospitalizations and deaths need to be taken into consideration when assessing the full burden of disease on the community and utilization of the health care system. This information can also be used for program planning and evaluation of the effectiveness of disease prevention and health promotion strategies by tracking trends through time.

## 1.0 LIVE BIRTHS, 1998-2000

**Table 1.1: Number of Live Births, Haldimand and Norfolk Moms, 1998-2000.**

Calendar Year	Males	Females	Total
1998	536	546	1,082
1999	477	473	950
2000	477	422	899
2001	526	537	1,063

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

**Table 1.2: Number and Proportion of Births by County of Birth, Haldimand and Norfolk Moms, 1998-2000.**

County where birth took place	1998	1999	2000	2001
Haldimand and Norfolk Counties	510 47.1%	431 45.4%	424 47.2%	435 40.9%
Brant County	115 10.6%	120 12.6%	117 13.0%	128 12.0%
Elgin	38 3.5%	23 2.4%	35 3.9%	34 3.2%
Halton	11 1.0%	7 0.7%	8 0.9%	14 1.3%
Middlesex	71 6.6%	71 7.5%	60 6.7%	54 5.1%
Niagara	18 1.7%	14 1.5%	18 2.0%	25 2.4%
Oxford	38 3.5%	39 4.1%	43 4.8%	22 2.1%
Hamilton	263 24.3%	229 24.1%	172 19.1%	329 31.0%
Other	18 1.7%	16 1.7%	22 2.4%	22 2.1%
<b>TOTAL</b>	<b>1,082</b>	<b>950</b>	<b>899</b>	<b>1,063</b>

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.



Table 1.3: Age of Haldimand and Norfolk Moms, 1998-2001.

Age Group	1998	1999	2000	2001
<b>10-19</b>	73 6.7%	67 7.1%	65 7.2%	76 7.1%
<b>20-24</b>	220 20.3%	213 22.4%	192 21.4%	203 19.1%
<b>25-29</b>	375 34.7%	300 31.6%	292 32.5%	347 32.6%
<b>30-34</b>	286 26.4%	260 27.4%	226 25.1%	297 27.9%
<b>35-39</b>	110 10.2%	93 9.8%	104 11.6%	115 10.8%
<b>40-49</b>	17 1.6%	16 1.7%	19 2.1%	25 2.4%
<b>TOTAL</b>	<b>1,082</b>	<b>950</b>	<b>899</b>	<b>1,063</b>

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

Table 1.4: Marital Status of Haldimand and Norfolk Moms, 1998-2001.

Age Group	1998	1999	2000	2001
<b>Single (Never Married)</b>	157 14.5%	137 14.4%	99 11.0%	153 14.4%
<b>Married</b>	793 73.3%	670 70.5%	616 68.5%	716 67.4%
<b>Divorced</b>	13 1.2%	6 0.6%	6 0.7%	10 0.9%
<b>Not specified</b>	117 10.8%	137 14.4%	178 19.8%	183 17.2%
<b>TOTAL</b>	<b>1,082</b>	<b>950</b>	<b>899</b>	<b>1,063</b>

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

**Table 1.5: Duration of Pregnancy, Haldimand and Norfolk Moms, 1998-2001.**

<b>Gestational Age (in weeks)</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
<b>20-31</b>	13 1.2%	12 1.3%	4 0.4%	6 0.6%
<b>32-36</b>	60 5.5%	49 5.2%	70 7.8%	72 6.8%
<b>37-41</b>	979 90.5%	869 91.5%	811 90.2%	967 91.0%
<b>42+</b>	29 2.7%	19 2.0%	13 1.4%	18 1.7%
<b>TOTAL</b>	<b>1,082</b>	<b>950</b>	<b>899</b>	<b>1,063</b>

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

**Table 1.6: Baby's birth weight, Haldimand and Norfolk Moms, 1998-2001.**

<b>Birth weight (in grams)</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
<b>&lt; 1500</b>	8 0.7%	7 0.7%	0.2%	0.4%
<b>1500-2499</b>	57 5.3%	47 4.9%	41 4.6%	48 4.5%
<b>2500+</b>	1,017 94.0%	896 94.3%	856 95.2%	1,011 95.1%
<b>TOTAL</b>	<b>1,082</b>	<b>950</b>	<b>899</b>	<b>1,063</b>

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

**Table 1.7: Type of Birth, Haldimand and Norfolk Moms, 1998-2001.**

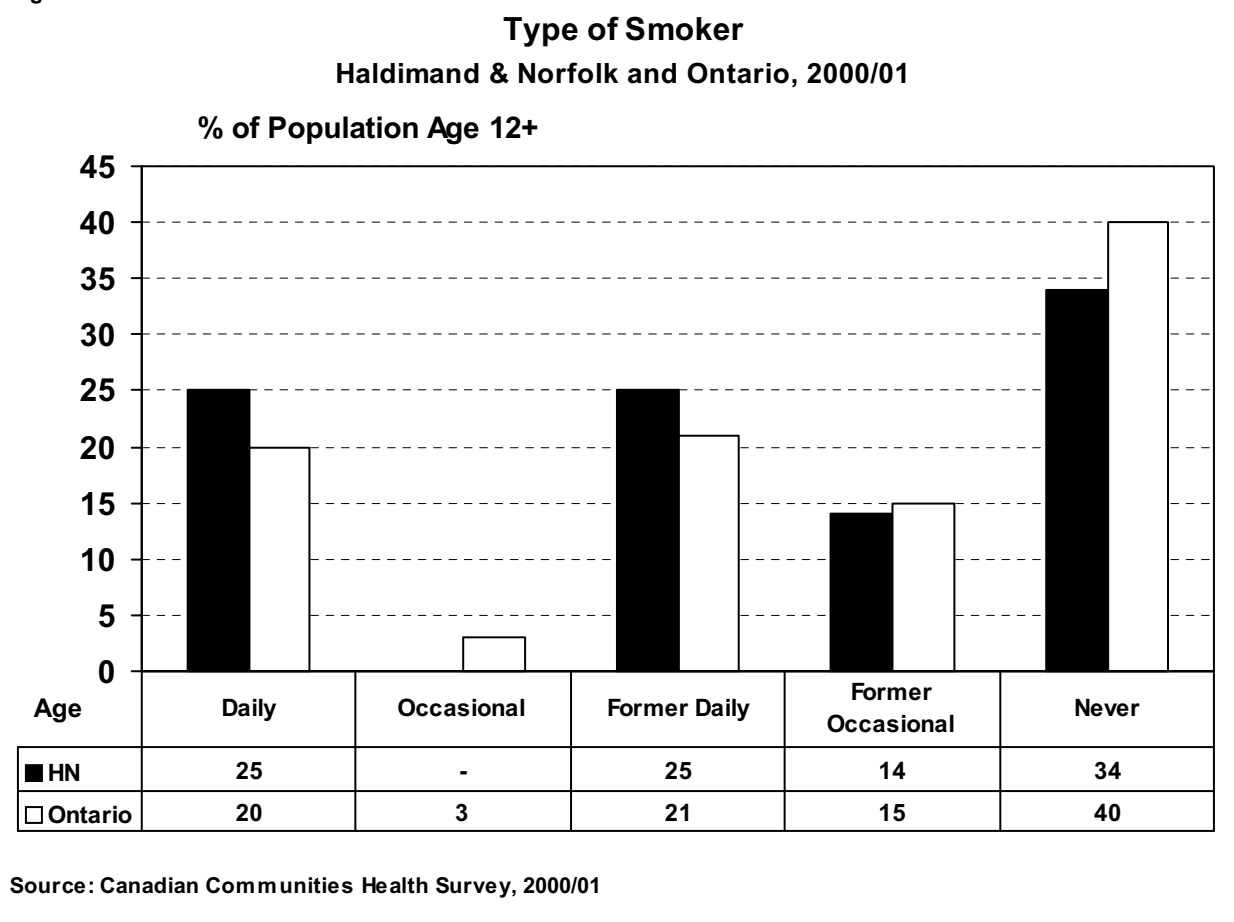
<b>Type of Birth</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
<b>Single</b>	1,051 97.1%	921 96.9%	857 95.3%	1,037 97.6%
<b>Multiple</b>	31 2.9%	29 3.1%	42 4.7%	26 2.4%
<b>TOTAL</b>	<b>1,082</b>	<b>950</b>	<b>899</b>	<b>1,063</b>

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

## 2.0 LIFESTYLE AND HEALTH-RELATED BEHAVIOURS

### 2.1 Tobacco and Smoking

Figure 2.1

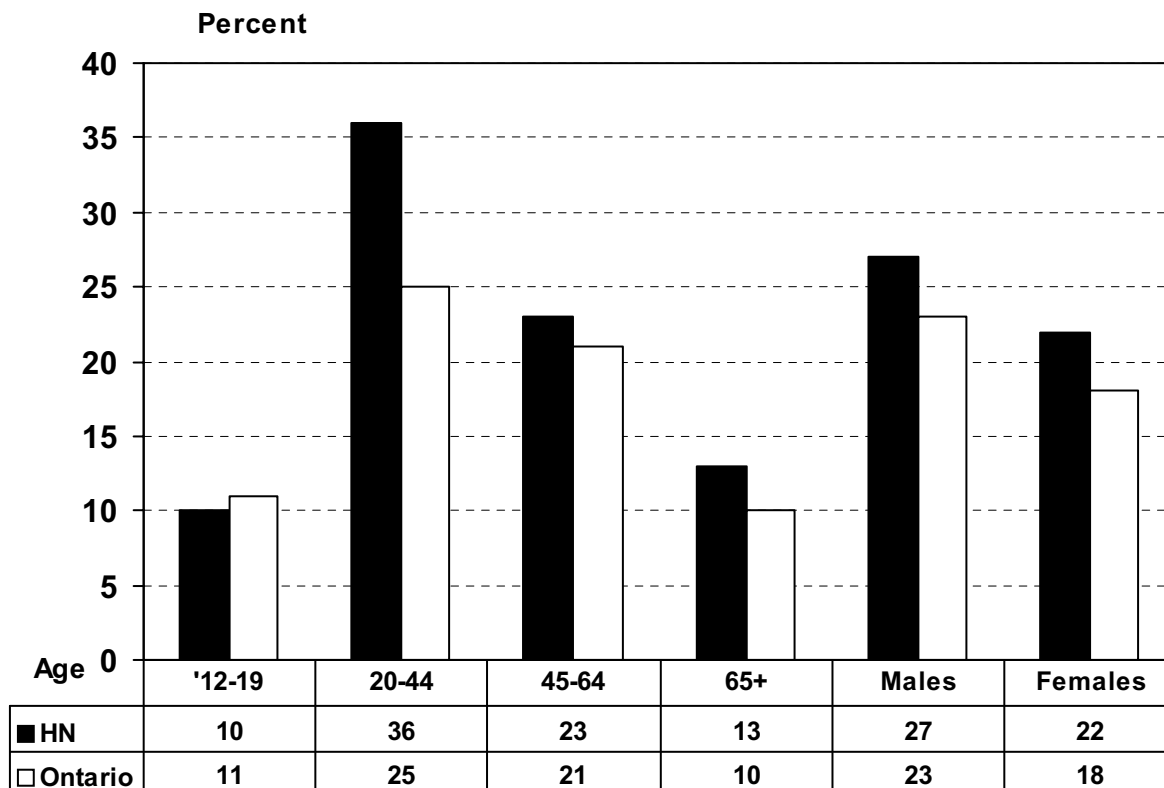


#### Key Findings:

- In 2000/01, a significantly lower proportion of Haldimand and Norfolk residents (34%) aged 12 and older indicated that they had never smoked as compared to their Ontario counterparts (40%).
- While 25% of the residents of Haldimand and Norfolk indicated being daily smokers as compared to 20% of Ontario residents, there were no significant differences between Haldimand & Norfolk and Ontario residents in the proportion of those who indicated being daily, former daily or former occasional smokers.
- In Haldimand and Norfolk, significantly higher proportion of residents indicated being daily smokers (25%) than having been 'former occasional' smokers (14%).

Figure 2.2

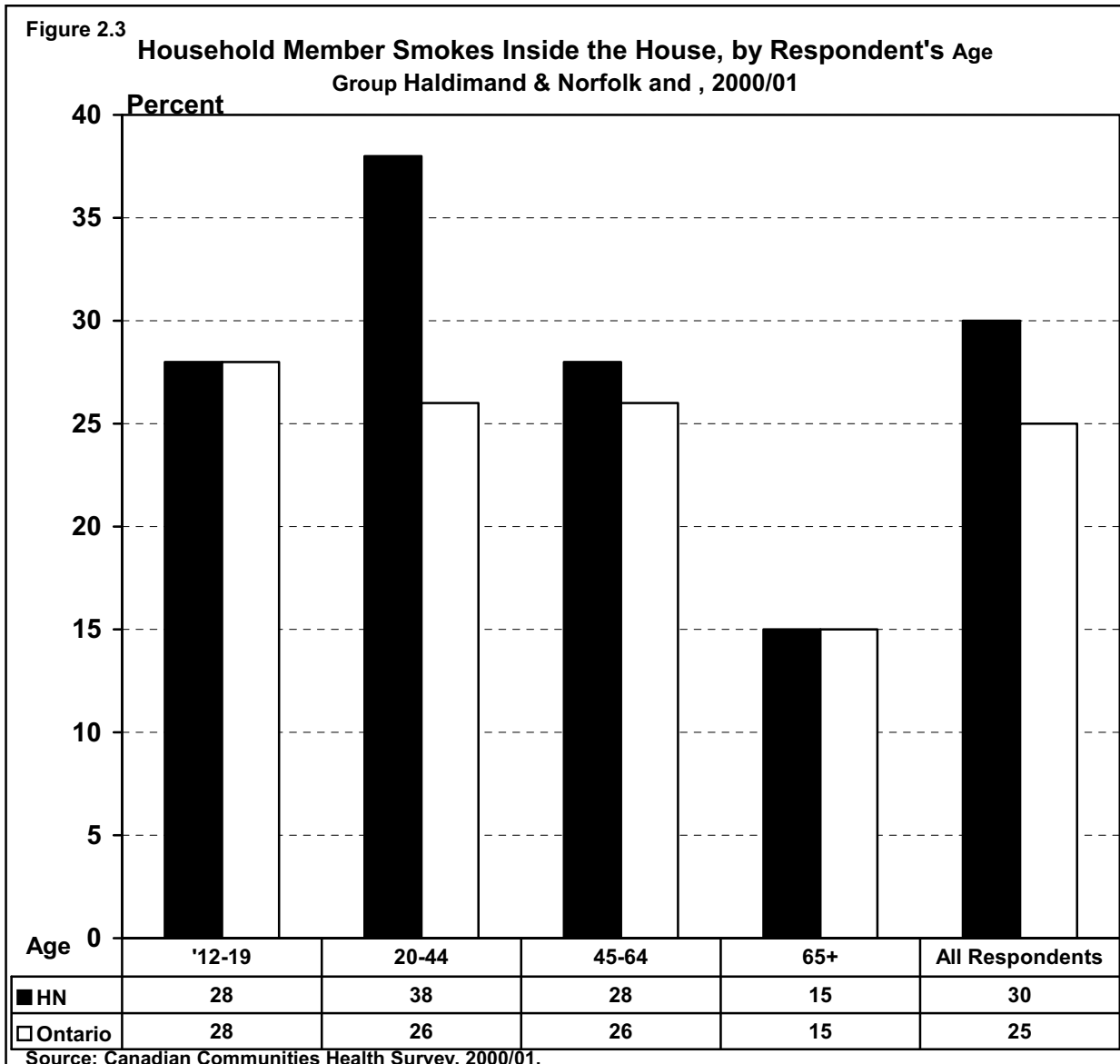
**Daily Smokers, by Age Group and Sex**  
Haldimand & Norfolk and Ontario, 2000/01



Source: Canadian Communities Health Survey, 2000/01

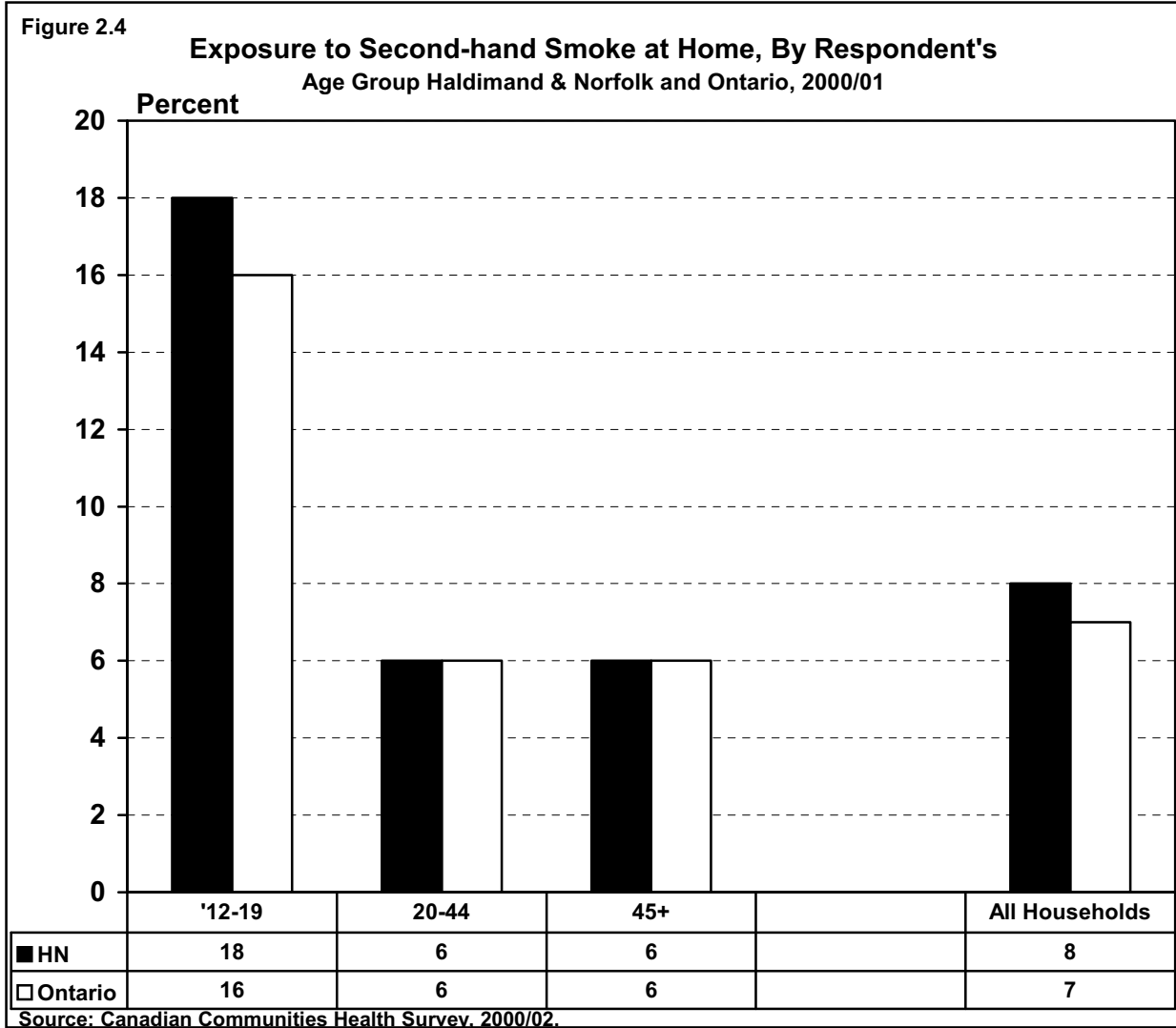
**Key Findings:**

- Significantly more Haldimand and Norfolk residents in the 20-44 age group indicated being daily smokers (36%) as compared to their Ontario counterparts (25%).
- While the proportion of Ontario males (23%) who indicated being daily smokers was significantly higher than Ontario females (18%), such a significant difference was not found in Haldimand and Norfolk.
- In Haldimand and Norfolk, a significantly lower proportion of seniors aged 65+ (13%) indicated being daily smokers than their younger counterparts.
- Ten percent of Haldimand and Norfolk youth aged 12-19 indicated being daily smokers.



**Key Findings:**

- In 2000/01, a significantly higher proportion of Haldimand and Norfolk residents aged 20-44 (38%) indicated having a household member who smoked inside, as compared to their Ontario counterparts (26%).
- There was an overall significant difference between Haldimand & Norfolk and Ontario in the proportion of all Haldimand and Norfolk residents who indicated having a household member who smoked inside the house (30% v.s. 25%).
- In Haldimand and Norfolk Counties, a significantly lower proportion of the residents aged 65+ (15%) indicated having a household member who smoked inside the house than their younger counterparts.

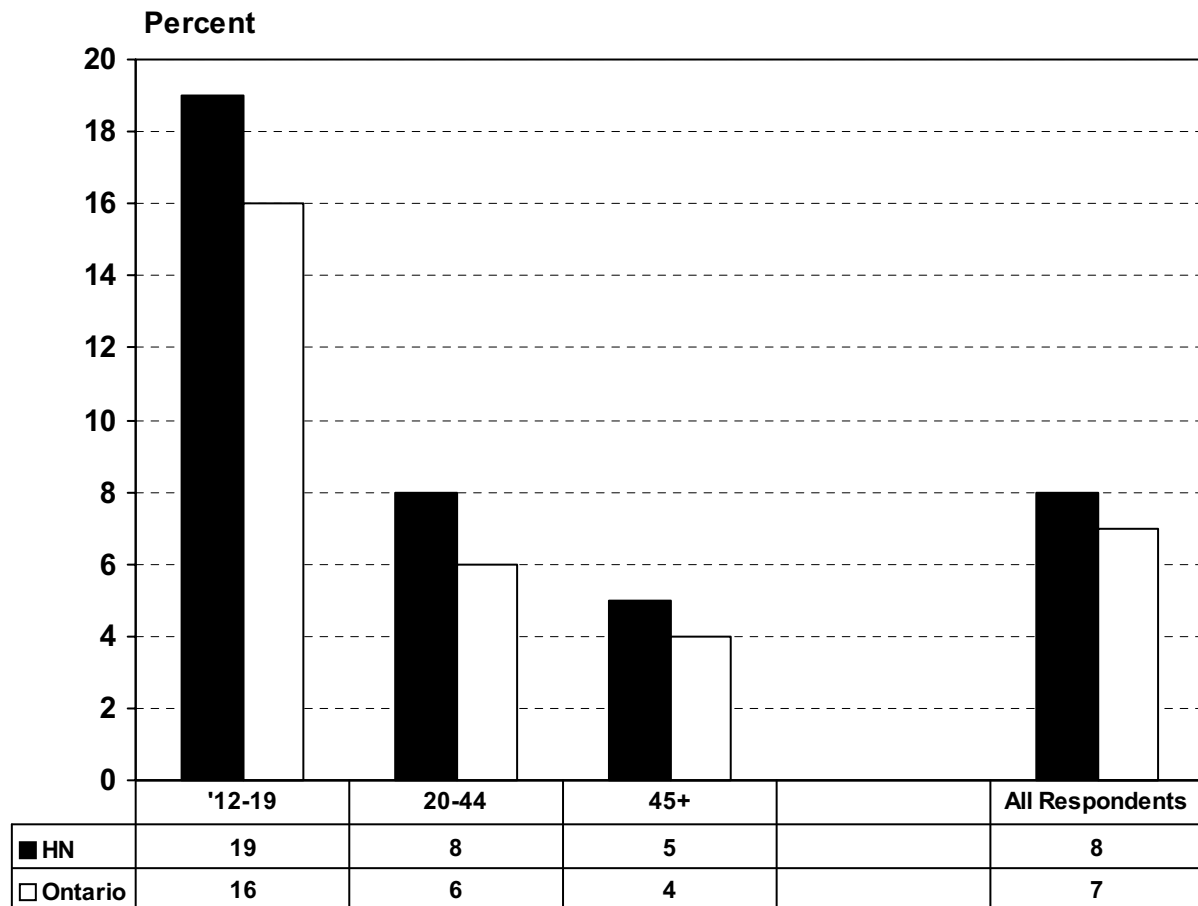


**Key Findings:**

- In 2000/01 no significant differences were found between Haldimand and Norfolk Counties and Ontario in the proportion of respondents who indicated that they were exposed to second-hand smoke inside their home.
- Similarly, no such differences were found amongst the residents of Haldimand and Norfolk Counties in the three age groups.

Figure 2.5

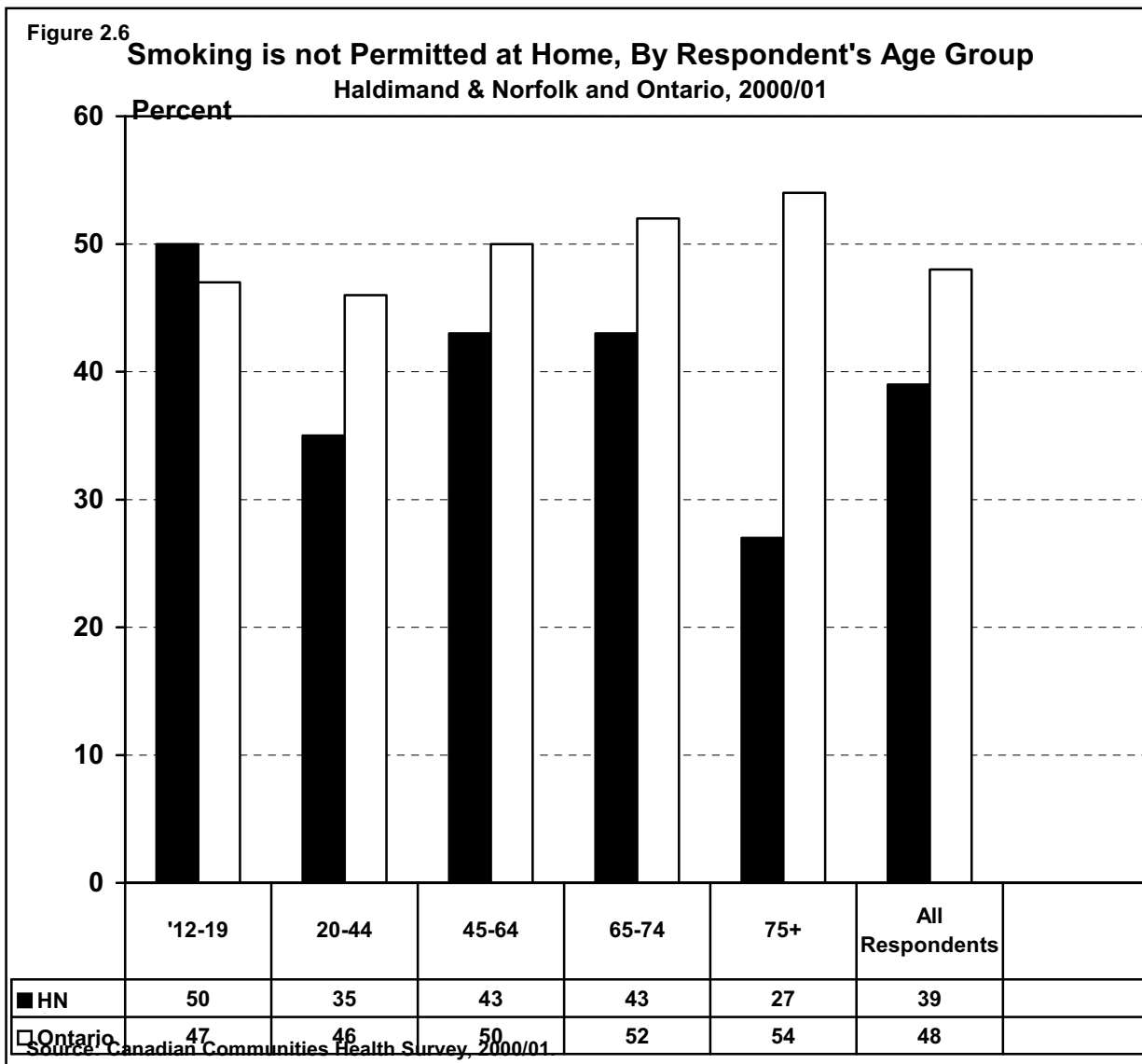
Exposure to Second-hand Smoke in the Car, By Respondent's Age Group Haldimand & Norfolk and Ontario, 2000/01



Source: Canadian Communities Health Survey, 2000/01.

**Key Findings:**

- In 2000/01 no significant differences were found between Haldimand and Norfolk Counties and Ontario in the proportion of respondents who indicated that they were exposed to second-hand smoke inside their car.
- In 2000/01, in Haldimand and Norfolk Counties, a significantly higher proportion of youth (19%) aged 12-19 indicated exposure to second-hand smoke inside the car as compared to those aged 45 and older (5%).



**Key Findings:**

- When asked whether smoking was not permitted at home, a significantly lower proportion of the residents of Haldimand and Norfolk Counties (39%) responded positively to this question as compared to Ontario residents overall (48%). Specifically, a significantly lower proportion of the Haldimand and Norfolk residents aged 20-44 (35%) responded positively to this question as compared to their Ontario counterparts (46%).
- There were no significant differences amongst the residents of Haldimand and Norfolk Counties by age group.



2.2 Alcohol and Drinking

Table 2.1: Frequency of Drinking Alcohol, Proportion of Population Aged 12 and older, Haldimand & Norfolk and Ontario, 2000/01.

Frequency of Drinking Alcohol	% HN (95% CI)	% Ontario (95% CI)
Less than once per month	20% (17.12-22.79)	20% (18.86-20.19)
Once per month	6% (4.11-8.77)	9% (8.22-9.11)
2-3 times per month	11% (8.71-14.01)	11% (10.63-11.54)
Once per week	13% (10.0-15.5)	13% (11.98-12.92)
2-3 times per week	16% (11.92-19.08)	13% (12.73-13.70)
4-6 times per week	5% (2.92-6.57)	4% (3.35-3.86)
Every day	6% (3.55-7.36)	7% (6.36-7.15)

Source: Canadian Communities Health Survey, 2000/01.

**Key Findings:**

- There were no significant differences between Haldimand & Norfolk and Ontario in the proportion of respondents who indicated the various frequencies of alcohol consumption.
- In Haldimand and Norfolk, 20% indicated drinking less than once per month; 6% indicated drinking once per month; 40% indicated drinking from 2-3 times per month to 2-3 times per week; and 11% indicated drinking 4-6 times per week to every day.

**Table 2.2: Frequency of Drinking Five or more Drinks, Proportion of Population Aged 12 and older, Haldimand & Norfolk and Ontario, 2000/01.**

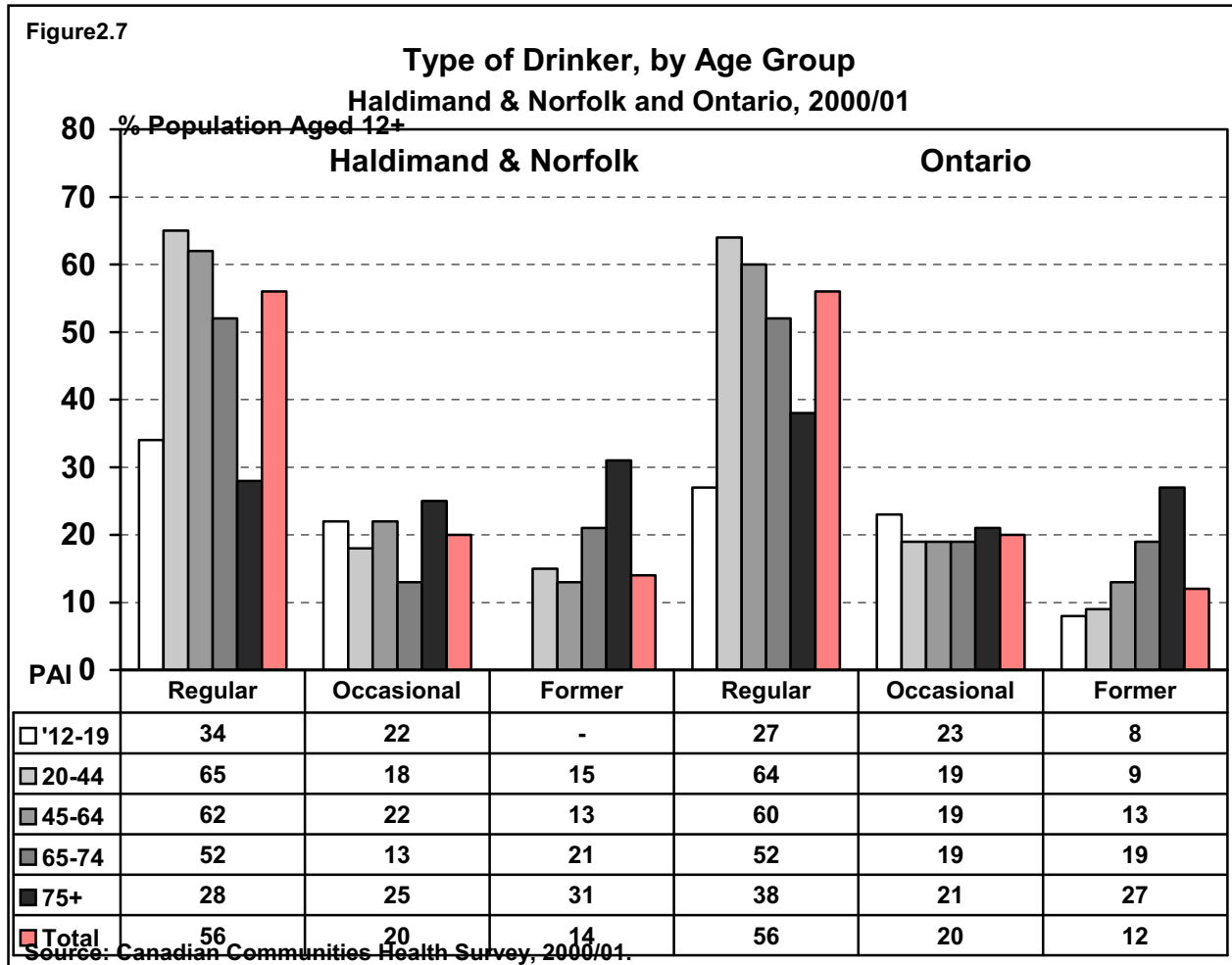
<b>Frequency of Drinking Five or more Drinks</b>	<b>% HN (95% CI)</b>	<b>% Ontario (95% CI)</b>
<b>Never</b>	39% (34.5-42.78)	44% (43.13-44.66)
<b>Less than once per month</b>	20% (16.0-24.23)	17% (16.20-17.31)
<b>Once per month</b>	5% (3.09-6.23)	5% (4.48-5.02)
<b>2-3 times per month</b>	5% (2.95-6.41)	4% (3.80-4.33)
<b>Once per week</b>	6% (3.36-7.79)	4% (3.38-3.94)
<b>Less than once per week</b>	2% (0.75-3.53)	2% (1.84-2.27)

Source: Canadian Communities Health Survey, 2000/01.

**Key Findings:**

- In 2000/01, a significantly lower proportion (39%) of Haldimand and Norfolk residents indicated having never drunk five or more drinks, as compared to residents of Ontario (44%).
- In Haldimand and Norfolk, 2% of the respondents indicated drinking five or more drinks more than once per week, while 6% indicated such consumption once per week. These findings are similar to Ontario.

2.2.1 Type of Drinker



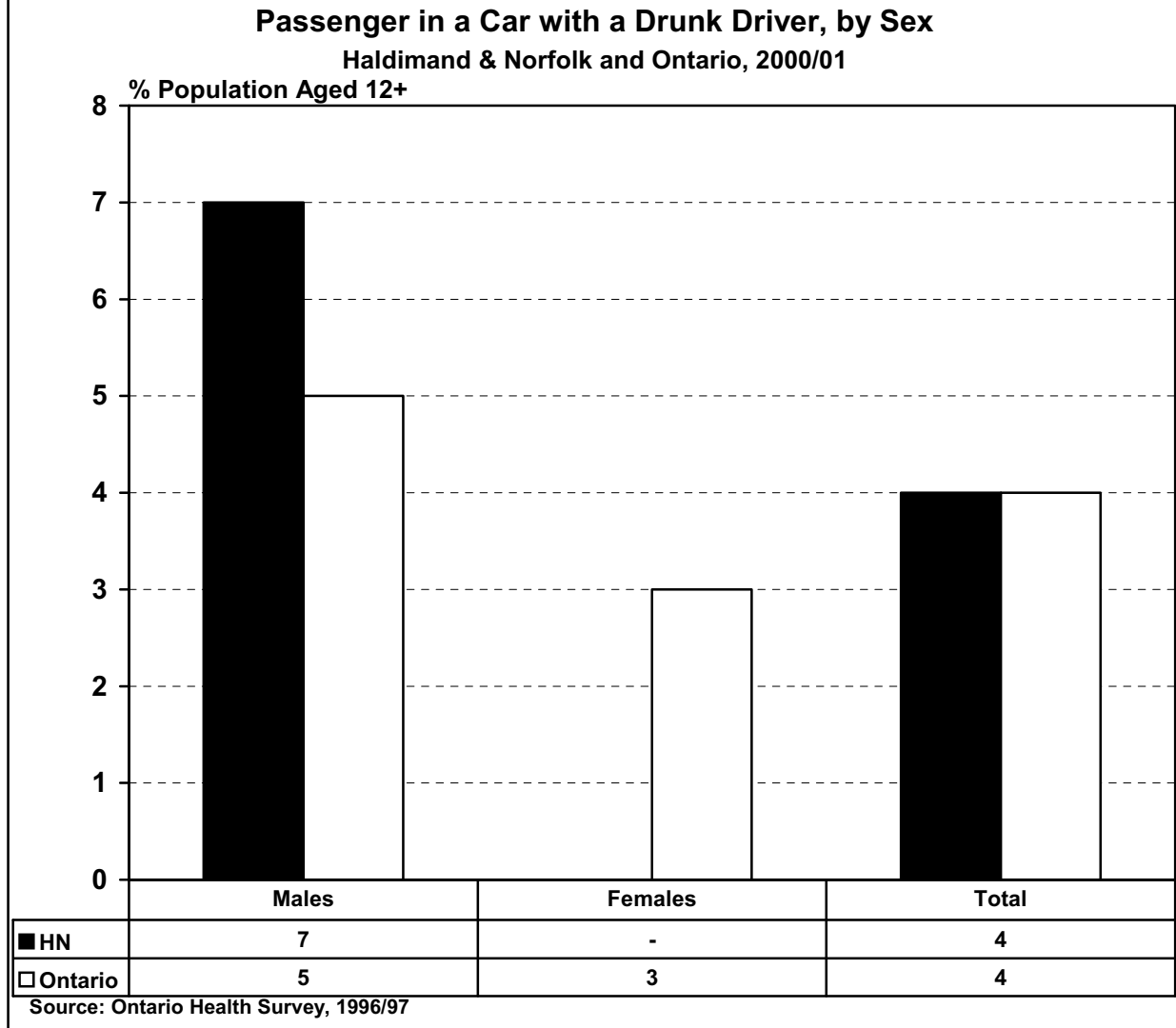
**Key Findings:**

- A significantly higher proportion of Haldimand and Norfolk residents aged 20-44 (15%) indicated being former drinkers as compared to their Ontario counterparts (9%). There were no other significant age-specific differences between Haldimand and Norfolk Counties and Ontario in the proportion of population who indicated being a regular, occasional or former drinker.
- In 2000/01, thirteen percent of the Ontario population overall indicated having never been a drinker. This proportion is significantly higher from that of Haldimand and Norfolk, where 10% indicated the same.
- Thirty-four percent of Haldimand and Norfolk youth aged 12-19 indicated being regular drinkers, as compared to 27% of Ontario youth overall. This difference, however, was not statistically significant.
- In Haldimand and Norfolk Counties, 56% of the residents aged 12 and older indicated being regular drinkers, 20% indicated being occasional drinkers and 14%

indicated being a former drinker. The proportion of regular drinkers was significantly higher than occasional, former or 'never' drinkers. And, the proportion of occasional drinkers was significantly higher than that of former and 'never' drinkers. The difference between the proportion of those who indicated being former drinkers and those who indicated having never been a drinker may not be of high statistical significance.

- A significantly lower proportion of Haldimand and Norfolk residents aged 75+ (28%) indicated being regular drinkers as compared to their younger counterparts aged 20-74. There was no significant difference between seniors aged 75+ and youth aged 12-19 (34%) in the proportion that reported being regular drinkers.

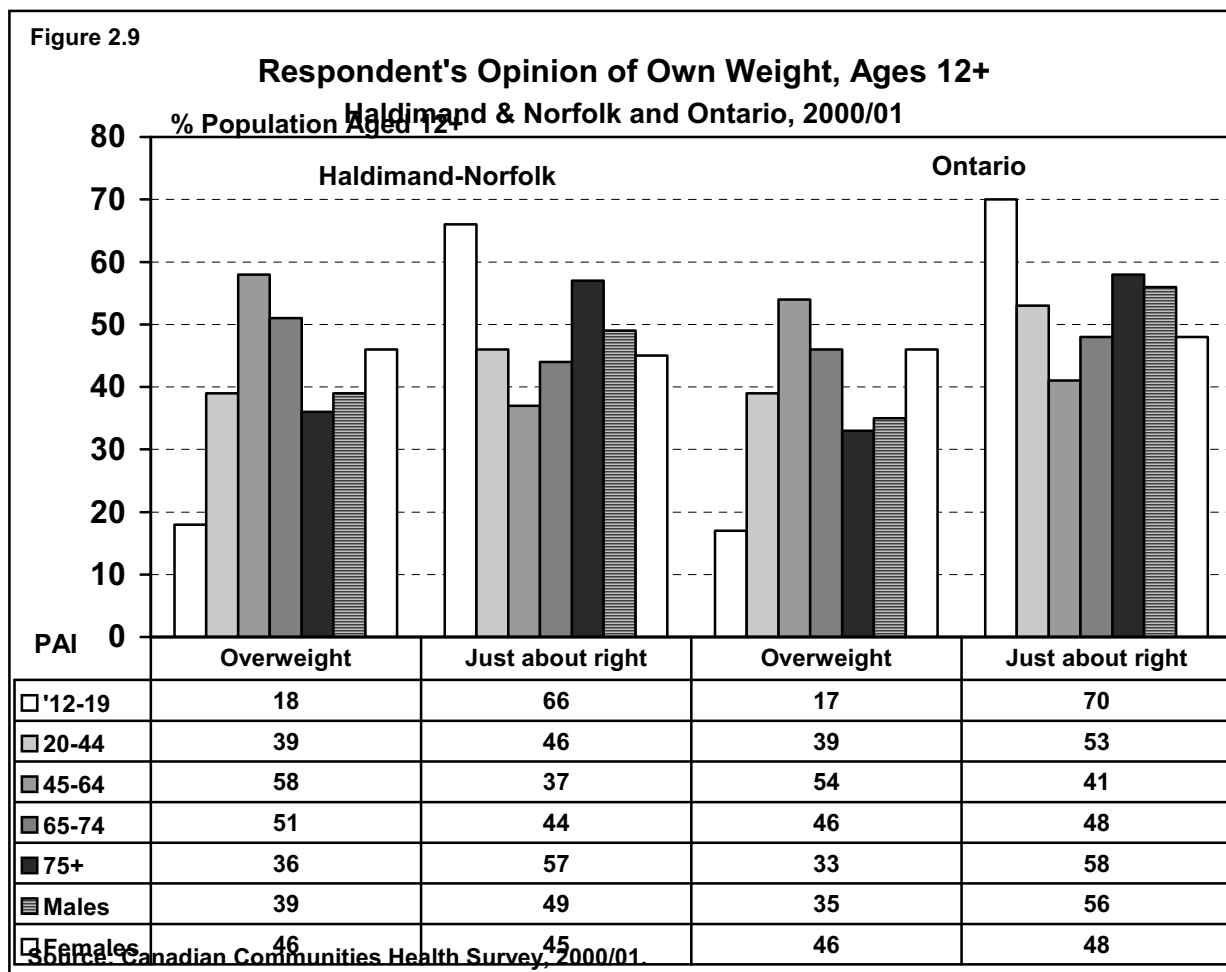
Figure 2.8



**Key Findings:**

- In 2000/01, in Haldimand and Norfolk Counties as in Ontario, 4% of the population indicated having been a passenger in a car with a drunk driver. There was no significant difference between males and females who responded positively to this question.

### 2.3 Weight



#### Key Findings:

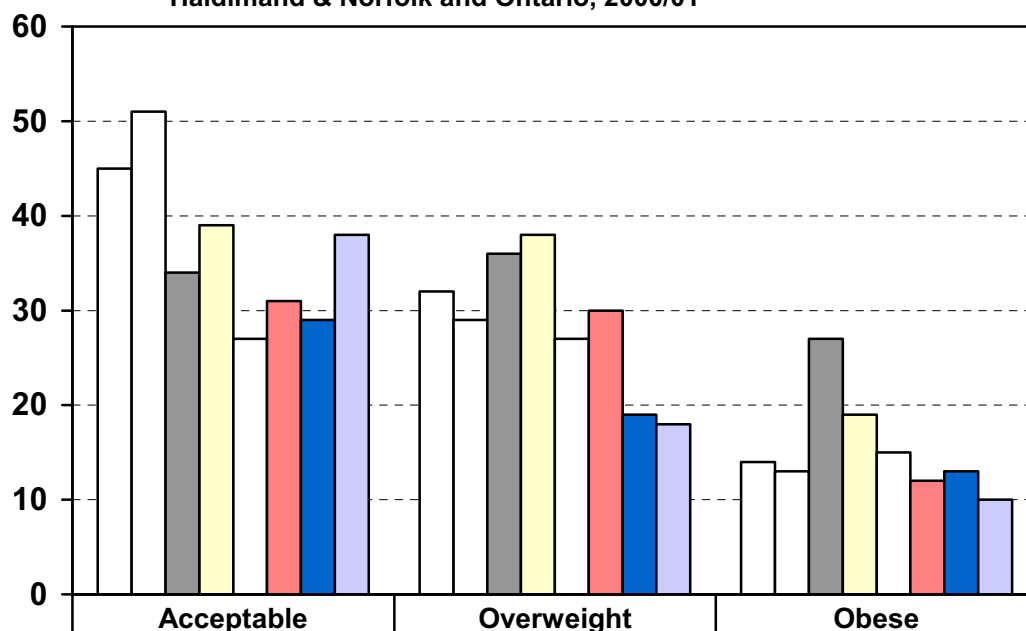
- In 2000/01, 18% of Haldimand and Norfolk youth aged 12-19 and 17% of Ontario youth indicated that they thought they were overweight. And, similar proportions of those aged 20+ stated opinions of being overweight (39% in Haldimand and Norfolk and in Ontario). There were no age-specific significant differences between Haldimand & Norfolk and Ontario in the proportion of respondents who felt that they were overweight.
- Similarly, there were no age-specific differences between Haldimand & Norfolk and Ontario in the proportion of respondents who felt that their weight was 'just about right'. While 66% of Haldimand and Norfolk youth aged 12-19 felt this way, so did 70% of the Ontario youth overall.
- In Haldimand and Norfolk Counties, 58% of adults aged 45-64 felt that they were overweight. This proportion was significantly higher than that of youth aged 12-19 (18%), adults aged 20-44 (39%) and seniors aged 75+ (36%). Conversely, only 37% of the Haldimand and Norfolk residents aged 45-64 felt that their weight was

'just about right'. This proportion was significantly lower from the proportion of youth aged 12-19 (66%) but not significantly difference from adults aged 20-44 or those aged 65+.

- A significantly higher proportion of Haldimand and Norfolk youth aged 12-19 (66%) and seniors aged 75+ (57%) indicated that their weight was 'just about right' as compared to their same-age counterparts who indicated being 'overweight' (18% and 36%, respectively).

Figure 2.10

**Body Mass Index - International Standard, Age 20-64**  
Haldimand & Norfolk and Ontario, 2000/01



	Acceptable	Overweight	Obese
□ HN - 20-44	45	32	14
□ ONT - 20-44	51	29	13
■ HN - 45-64	34	36	27
■ ONT - 45-64	39	38	19
□ HN - Males	27	27	15
■ ONT - Males	31	30	12
■ HN - Females	29	19	13
■ ONT - Females	38	18	10

Source: Canadian Communities Health Survey, 2000/01.

Note: 'acceptable' = BMI between 18.5-24.9; 'overweight' = BMI between 25-29.9; 'obese' = BMI > 30.

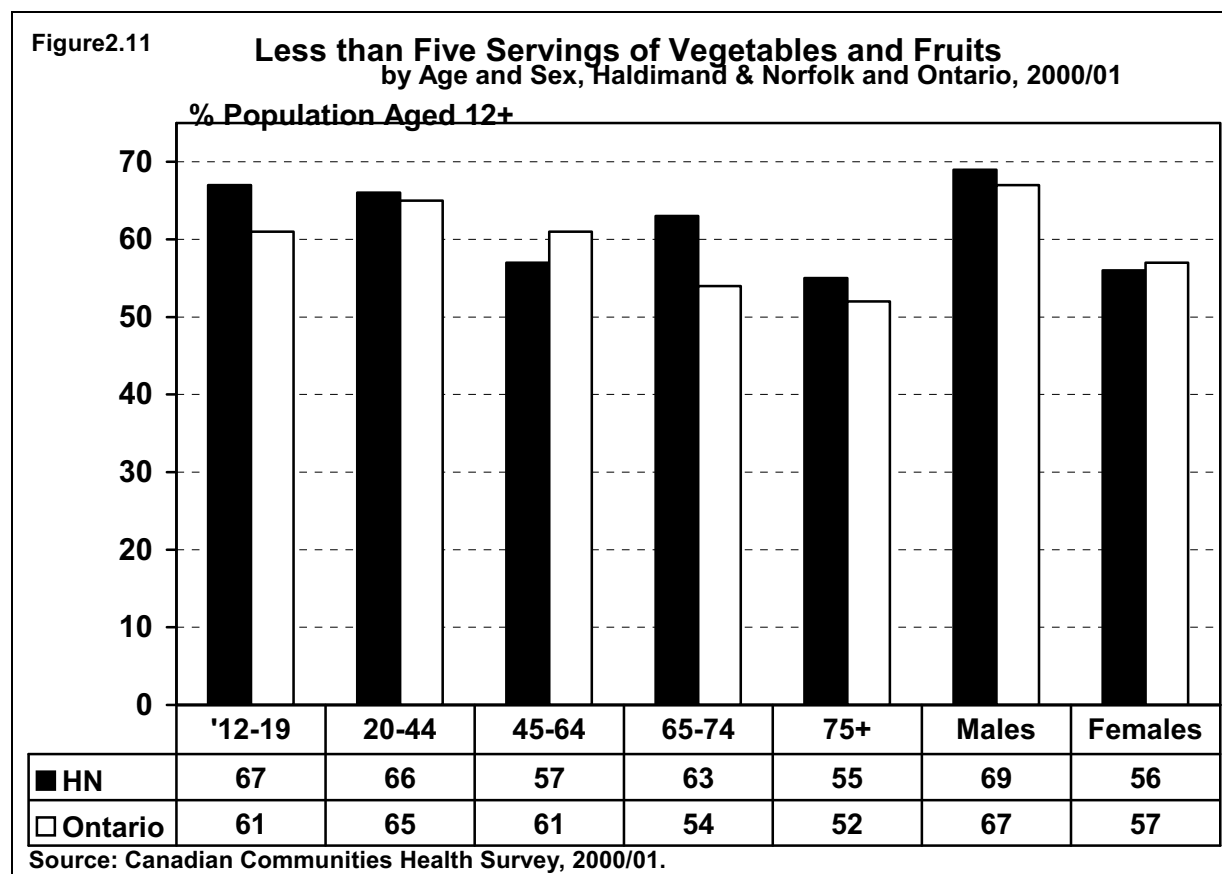
**Key Findings:**

- In 2000/01, a significantly lower proportion of Haldimand and Norfolk females (29%) was classified as having 'acceptable' body mass index (BMI) as compared to Ontario women overall (38%).
- In Haldimand and Norfolk Counties, while there difference between the proportion of adults aged 20-44 classified as having 'acceptable' BMI (45%) may not be highly statistically different from the proportion classified as 'overweight' (32%), the proportion of those classified as having 'obese' BMI (14%) was significantly lower from these two categories.
- Among Haldimand and Norfolk adults aged 45-64, the proportion of those classified as having 'acceptable' BMI was significantly higher (34%) from those classified as 'obese' (27%).



- In Haldimand and Norfolk Counties, there were no significant differences between those aged 20-44 and those aged 45-64 in the three BMI categories.
- While 27% of the Haldimand and Norfolk adults aged 45-64 were classified as being 'obese', compared to 19% of their Ontario peers, this difference was not statistically significant.

2.4 Nutrition

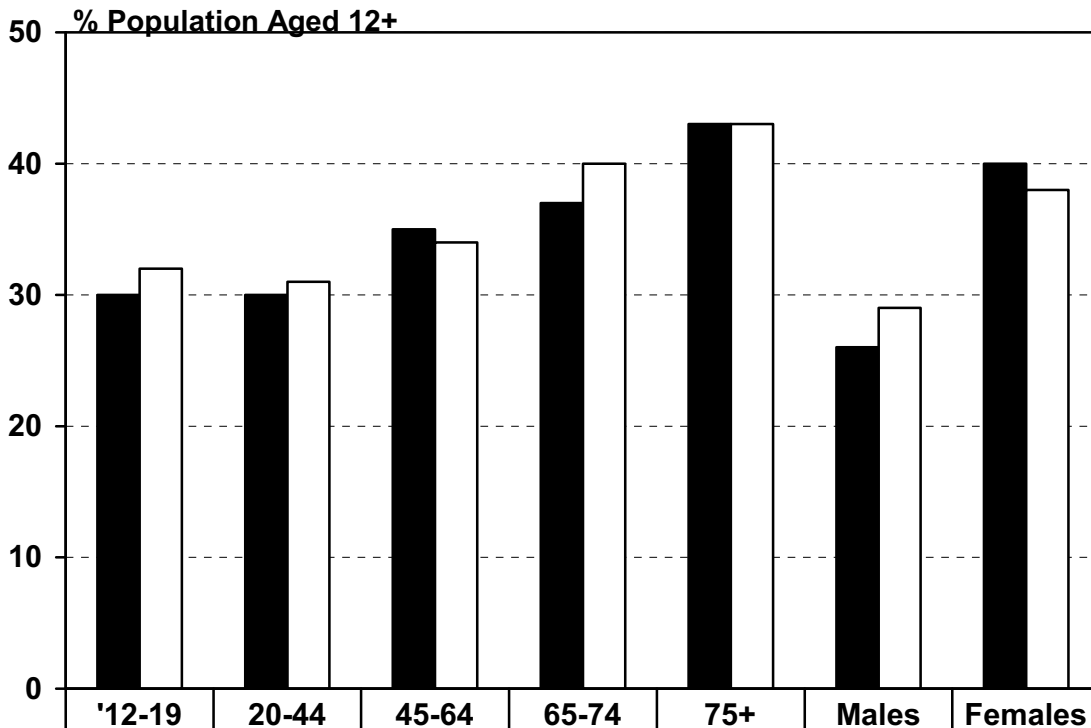


**Key Findings:**

- There were no age-specific differences found between the residents of Haldimand and Norfolk Counties and Ontario in the proportion of respondents who indicated consuming less than 5 servings of vegetables and fruits.
- In Haldimand and Norfolk Counties, a significantly higher proportion of males (69%) indicated consuming less than 5 servings of vegetables and fruits as compared to females (56%). The same was found in Ontario.

Figure 2.12

**Five to Ten Servings of Vegetables and Fruits**  
by Age and Sex, Haldimand & Norfolk and Ontario, 2000/01



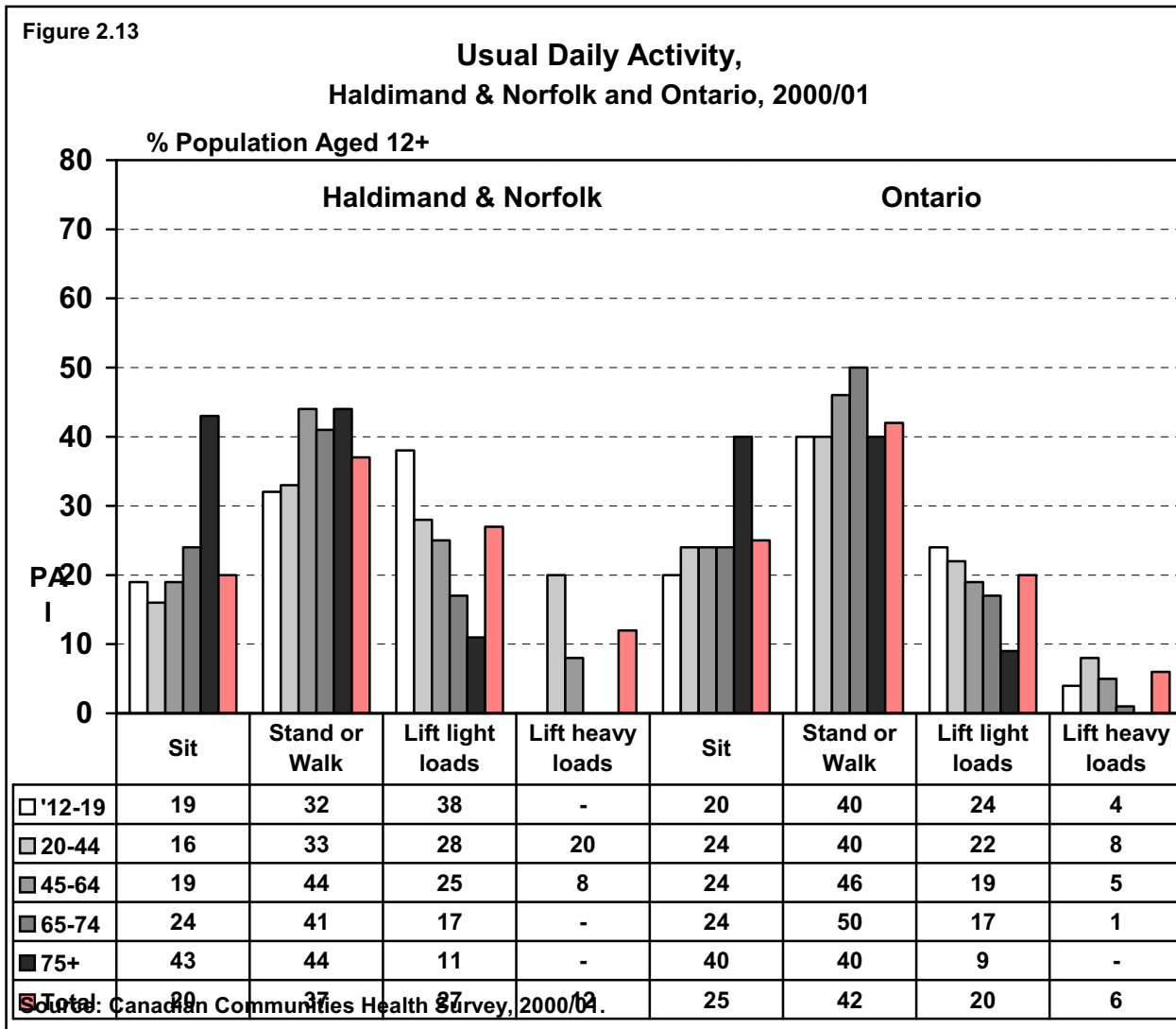
	'12-19	20-44	45-64	65-74	75+	Males	Females
■ HN	30	30	35	37	43	26	40
□ Ontario	32	31	34	40	43	29	38

Source: Canadian Communities Health Survey, 2000/01.

**Key Findings:**

- There were no age-specific differences found between the residents of Haldimand and Norfolk Counties and Ontario in the proportion of respondents who indicated consuming 5 to 10 servings of vegetables and fruits.
- In Haldimand and Norfolk Counties, a significantly higher proportion of females (40%) indicated consuming 5 to 10 servings of vegetables and fruits as compared to males (26%). The same was found in Ontario.

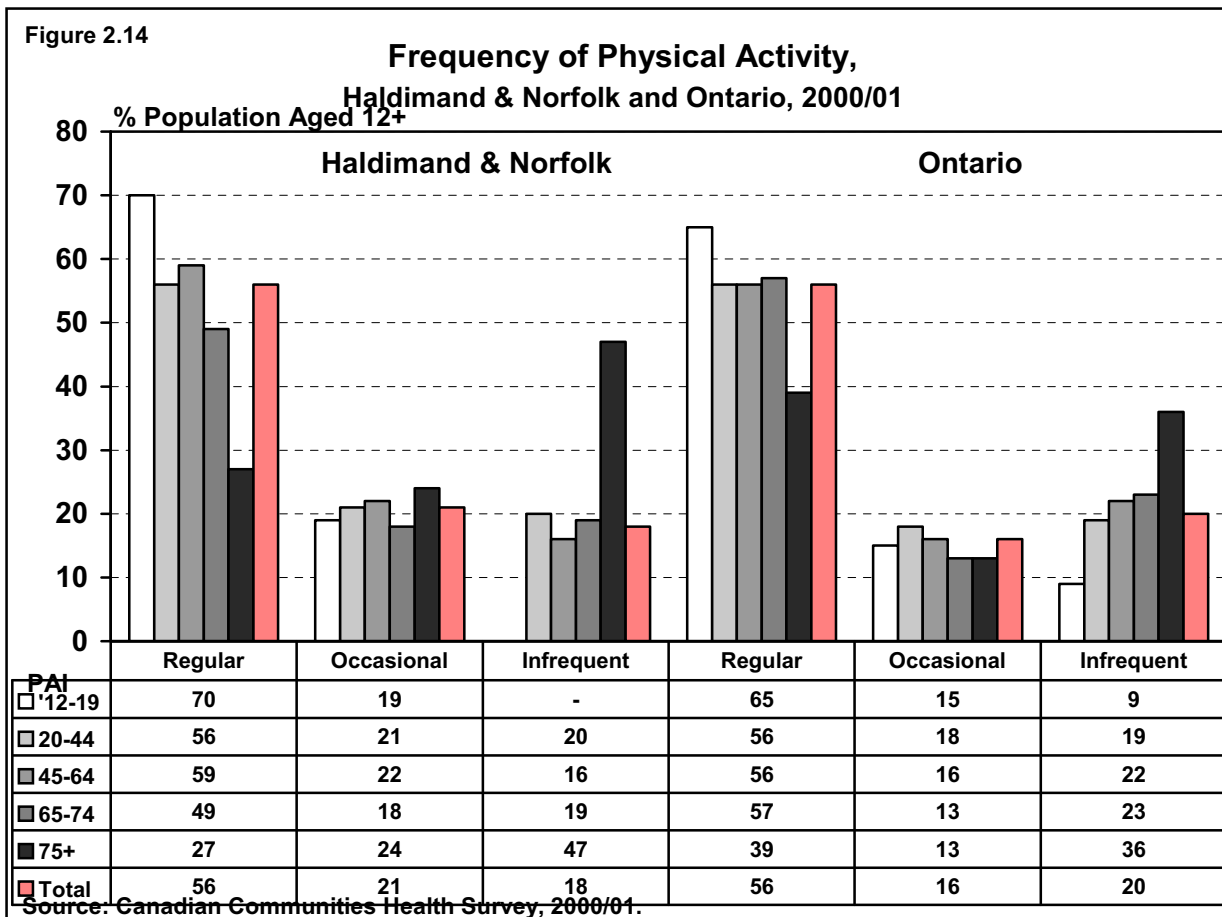
2.5 Physical Activity



**Key Findings:**

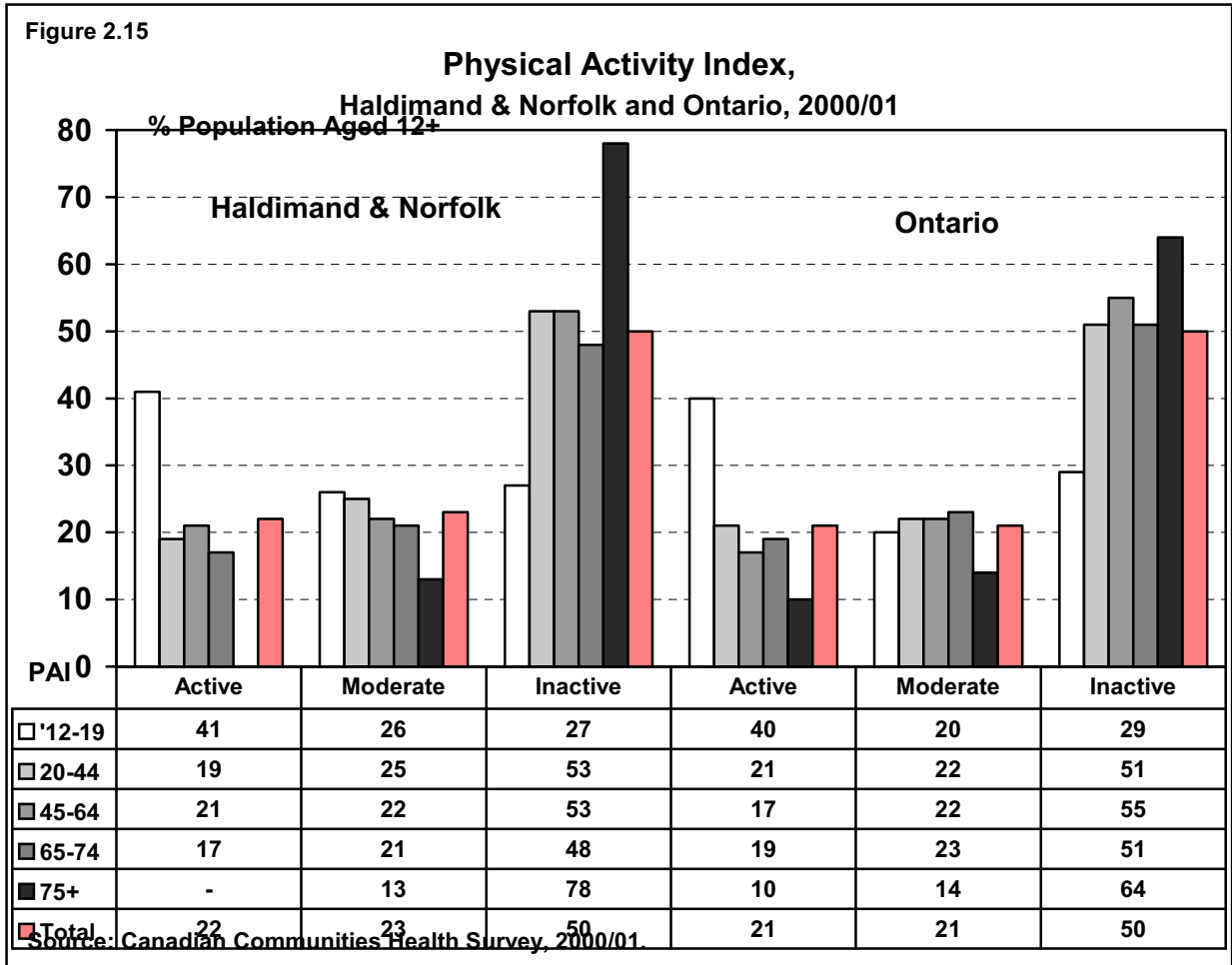
- A significantly lower proportion of Haldimand and Norfolk residents aged 20-44 (16%) indicated sitting as their usual daily activity as compared to Ontario residents in the same age group (24%). Overall, the proportion of Haldimand and Norfolk residents (20%) who indicated sitting as their usual activity was slightly significantly lower from the Ontario average (25%).
- A slightly significantly higher proportion of Haldimand and Norfolk residents aged 20-44 (33%) indicated standing or walking as their usual daily activity as compared to their Ontario counterparts (40%). The overall proportion of Haldimand and Norfolk residents who indicated standing or walking (37%) was slightly significantly lower from the Ontario average (42%).

- The proportion of Haldimand and Norfolk youth who reported lifting light loads (38%) was significantly higher from their Ontario peers (24%). And, a slightly significant difference was found when comparing Haldimand and Norfolk adults aged 20-44 (28%) to their Ontario counterparts (22%). Overall, the proportion of Haldimand and Norfolk residents who reported lifting light loads (27%) was significantly higher from the Ontario average (20%).
- Similarly, some significant differences were found when comparing Haldimand and Norfolk residents to Ontarians overall with respect to lifting of heavy loads. Haldimand and Norfolk adults aged 20-44 (20%) and those aged 45-64 (8%) were more likely to lift heavy loads during their daily activities than their Ontario counterparts (8% and 5%, respectively). Overall, the proportion of Haldimand and Norfolk residents who indicated lifting heavy loads during their daily activities (12%) was significantly higher than the Ontario average (6%).
- In Haldimand and Norfolk, a significantly higher proportion of the residents indicated standing or walking (37%) as their usual daily activity than sitting (20%), lifting light (27%) or heavy (12%) loads.



**Key Findings:**

- The only significant age-specific differences found between Haldimand & Norfolk and Ontario in the proportion of respondents who indicated a regular level of physical activity was among seniors aged 75+. While 27% of the Haldimand and Norfolk residents indicated a regular level of physical activity, 39% of their Ontario counterparts indicated the same.
- In Haldimand and Norfolk, 56% of the respondents indicated a regular level of physical activity. This proportion was significantly higher from those who indicated an occasional (21%) or an infrequent level of physical activity (18%).
- In Haldimand and Norfolk, 70% of youth aged 12-19 indicated being regularly physically active as compared to 56% of adults aged 20-44, 49% of adults aged 45-64, 49% of seniors aged 65-74 and 27% of seniors aged 75+.
- The proportion of Haldimand and Norfolk seniors aged 75+ who indicated being physically active on a regular basis was significantly lower from their younger counterparts aged 12-74. And, the proportion of these seniors who indicated their level of physical activity to be infrequent, was significantly higher (47%) as compared to their younger counterparts aged 20-44.



**Key Findings:**

- There were no age-specific or overall significant differences found between Haldimand & Norfolk and Ontario in the proportion of respondents who were classified into the three levels of the physical activity index.
- In Haldimand and Norfolk Counties, the proportion of youth aged 12-19 (41%) classified as 'active' was significantly higher than their older counterparts aged 20-44 (19%) and seniors age 75+ (17%). Similarly, the proportion of adults aged 20+ classified as 'inactive' was significantly higher than the proportion of youth.
- The proportion of Haldimand and Norfolk residents classified as 'inactive' (50%) was significantly higher than the proportion classified as 'active' (22%) and 'moderate' (23%).

### 3.0 MORBIDITY

**Table 3.1: Total Numbers and Crude Rates of Hospital Separations, by Sex, Haldimand and Norfolk Residents, 1999/2000 – 2002/03.**

<b>YEAR</b>	<b>HALDIMAND AND NORFOLK MALES Total Number Crude Rate per 1,000</b>	<b>HALDIMAND AND NORFOLK FEMALES Total Number Crude Rate per 1,000</b>	<b>HALDIMAND AND NORFOLK TOTAL Total Number Crude Rate per 1,000</b>
<b>1999/2000</b>	4,785 88.8	6,114 113.2	10,899 101.0
<b>2000/01</b>	4,774 87.6	6,129 112.2	10,903 99.9
<b>2001/02</b>	4,734 85.9	6,192 112.0	10,926 99.0
<b>2002/03</b>	4,631 82.9	5,786 103.3	10,417 93.1

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

#### Key Findings:

- In 2002/03, there were a total of 10,417 hospitalizations for residents of Haldimand and Norfolk Counties. This amount was down by 4.41% from 1999/2000 and 4.7% from 2001/02.
- Between 1999/2000 and 2002/03, females accounted for approximately 56% of all the hospital separations with an average of 6,055 hospitalizations per year. This represented an average crude rate of 110.2 hospital discharges per 1,000 Haldimand and Norfolk females.
- Hospitalizations for “Pregnancy, Childbirth and the Puerperium’ accounted for 11% of total hospitalizations each year and 19% of all female hospitalizations. The number of hospital discharges in this category declined from 1,366 in 1999/00 to 1,121 in 2002/03.
- Between 1999/00 and 2001/02, the average number of hospitalizations for Haldimand and Norfolk males was 4,731 with an average crude rate of 86.3 hospital discharges per 1,000 Haldimand and Norfolk males.



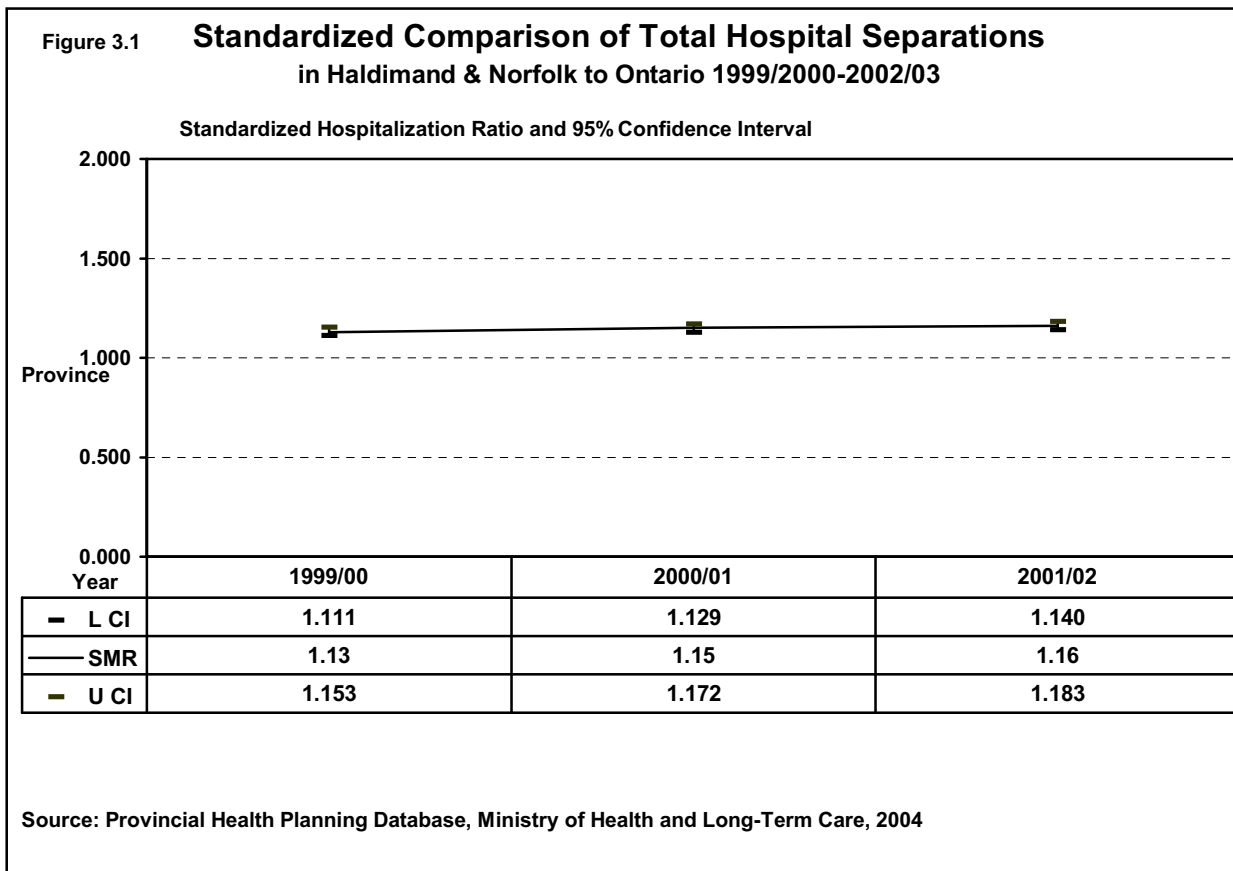
**Table 3.2 : Total Numbers and Standardized Rates of Hospital Separations, by Sex, Haldimand and Norfolk Residents, 1999/2000 – 2002/03.**

<b>YEAR</b>	<b>HALDIMAND AND NORFOLK MALES</b> Total Number Standardized Rate per 1,000	<b>HALDIMAND AND NORFOLK FEMALES</b> Total Number Standardized Rate per 1,000	<b>HALDIMAND AND NORFOLK TOTAL</b> Total Number Standardized Rate per 1,000
<b>1999/2000</b>	4,785 80.7 (78.5-82.8)	6,114 116.8 (114.0-120.0)	10,899 99.1 (97.4-100.9)
<b>2000/01</b>	4,774 79.7 (77.5-81.8)	6,129 113.3 (110.6-116.0)	10,903 96.8 (95.0-98.5)
<b>2001/02</b>	4,734 78.4 (76.3-80.5)	6,192 112.9 (110.2-115.6)	10,926 95.9 (94.1-97.6)
<b>2002/03</b>	4,631 74.3 (72.3-76.4)	5,786 102.6 (100.1-105.2)	10,417 88.8 (87.1-90.4)

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

### Key Findings:

- Between 1999/00 and 2001/02, the average standardized rate of hospitalizations for males was 78.3 per 1,000 Haldimand and Norfolk males.
- For females, the average standardized rate of hospitalizations was 111.4 per 1,000 Haldimand and Norfolk females.
- While the standardized rates of female hospitalizations were consistently significantly higher from those of the males, it needs to be noted that they included hospitalizations attributed to complications of pregnancy, and childbirth.
- Overall, the standardized rates of hospitalizations for residents of Haldimand and Norfolk Counties declined in this four-year period, with an average rate of 95.2 per 1,000 residents of Haldimand and Norfolk Counties.



**Key Findings:**

- On average, between 1999/00 and 2001/02 the age-standardized rates of hospitalizations for residents of Haldimand and Norfolk Counties exceeded the provincial rate of hospitalizations by 15%.
- Specifically, during this time period, the standardized rates of hospital separations for both female and male residents of Haldimand and Norfolk (H&N) were each on average 15% higher than their Ontario counterparts.

**Table 3.3: The Average Number, Proportion, Crude and Standardized Rate, and Standardized Ratio of hospitalizations for the Top 10 Leading Major Classifications, Haldimand and Norfolk Residents, 3-year Average, 1999/00-2001/02.**

Category (ICD-9 Chapter)	Avg. Number of Hospital Separations  Avg. Proportion of Total Number of Hospital Separations	Avg. Crude Rate per 1,000 of Hospital Separations	Avg. Standardized Rate per 1,000 of Hospital Separations (Confidence Intervals)	Avg. Standardized Hospital Separation Ratio (Confidence Interval)
Diseases of the Circulatory System	2,014 18.4%	18.591	15.578 (15.197-15.959)	1.25 (1.222-1.285)
Diseases of the Digestive System	1,163 10.7%	10.738	9.972 (9.633-10.310)	1.16 (1.126-1.203)
Diseases of the Respiratory System	949 8.7%	8.760	8.362 (8.050-8.673)	1.21 (1.165-1.254)
Injury and Poisoning	948 8.7%	8.748	8.189 (7.880-8.497)	1.25 (1.201-1.293)
Neoplasms	851 7.8%	7.852	6.754 (6.491-7.017)	1.07 (1.030-1.113)
Symptoms, Signs and Ill-defined Conditions	738 6.7%	6.809	6.353 (6.081-6.624)	1.26 (1.205-1.310)
Diseases of the Genitourinary System	666 6.1%	6.142	5.875 (5.609-6.142)	1.16 (1.109-1.210)
Diseases of the Musculoskeletal System and Connective Tissue	534 4.9%	4.926	4.430 (4.209-4.652)	1.15 (1.095-1.208)
Mental Disorders	428 3.9%	3.948	3.865 (3.645-4.085)	0.74 (0.697-0.777)
Certain Conditions Originating in the Perinatal Period	393 3.6%	3.625	5.287 (5.046-5.528)	1.12 (1.053-1.181)
<b>Avg. Total leading causes (% of Avg. TOTAL)</b>			<b>8,684 (79.6%)</b>	
<b>Avg. TOTAL</b>			<b>10,911</b>	

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

**Key Findings:**

- Between 1999/00 and 2001/02, there were 32,728 hospitalizations for residents of Haldimand and Norfolk Counties – an average of 10,909 hospitalizations per year.
- In this three-year period, of the 32,728 hospitalizations for residents of Haldimand and Norfolk Counties, 18% were attributed to Diseases of the Circulatory System. The other top 4 general reasons for hospitalizations included: Diseases of the Digestive and Respiratory Systems, Injury and Poisoning and Neoplasms (cancers).
- The rates of hospitalizations for all of the conditions listed in the table above were significantly higher from the provincial average, with the exception of 'Mental Disorders'. These rates ranged from being 7% higher for Neoplasms (cancers) to 25% higher for 'Diseases of the Circulatory System' and Injuries and 26% higher for 'Ill defined Symptoms, Signs and Ill-defined Conditions'.
- The rates of hospitalizations attributed to 'Mental Disorders' were 26% lower for residents of Haldimand and Norfolk Counties than the provincial average.

**Table 3.4: The Number, Proportion, Crude and Standardized Rate, and Standardized Ratio of Hospitalizations for the Top 10 Leading Major Classifications, Haldimand and Norfolk Residents, 2002/03.**

Category (ICD-9 Chapter)	Number of Hospital Separations  Proportion of Total Number of Hospital Separations	Crude Rate per 1,000 of Hospital Separations	Standardized Rate per 1,000 of Hospital Separations (Confidence Intervals)
Diseases of the Circulatory System	1,749 16.8%	15.627	12.614 (12.032-13.196)
Diseases of the Digestive System	1,270 12.2%	11.503	10.294 (9.714-10.875)
Diseases of the Respiratory System	935 9.0%	8.469	7.864 (7.346-8.382)
Injury and Poisoning	912 8.8%	8.261	7.595 (7.088-8.101)
Symptoms, Signs and Ill-defined Conditions	764 7.3%	6.920	6.101 (5.657-6.545)
Neoplasms	659 6.3%	5.969	4.998 (4.614-5.381)
Diseases of the Genitourinary System	635 6.1%	5.752	5.358 (4.926-5.789)
Diseases of the Musculoskeletal System and Connective Tissue	513 4.9%	4.647	4.068 (3.708-4.428)
Mental Disorders	470 4.5%	4.257	4.173 (3.780-4.566)
Certain Conditions Originating in the Perinatal Period	347 3.3%	3.089	4.385 (3.934-4.835)
<b>Total Leading Causes (% of TOTAL)</b>		<b>8,254</b> <b>79.2%</b>	
<b>TOTAL</b>		<b>10,421</b>	

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

Note: Hospitalizations due to pregnancy/childbirth were excluded from this analysis.

**Table 3.5: Top 10 Leading Major Classifications of Hospital Separations for Males, Haldimand and Norfolk Residents, 3-year Average, 1999/00-2001/02.**

Category (ICD-9 Chapter)	Avg. Number of Hospital Separations  Avg. Proportion of Male Number of Hospital Separations	Avg. Crude Rate per 1,000 of Hospital Separations	Avg. Standardized Rate per 1,000 of Hospital Separations (Confidence Intervals)	Avg. Standardized Hospital Separation Ratio (Confidence Interval)
Diseases of the Circulatory System	1,132 23.7%	20.961	19.504 (18.871-20.136)	1.22 (1.181-1.263)
Diseases of the Digestive System	542 11.4%	10.033	9.766 (9.281-10.250)	1.07 (1.018-1.122)
Diseases of the Respiratory System	506 10.6%	9.373	9.781 (9.287-10.274)	1.23 (1.166-1.289)
Injury and Poisoning	374 10.4%	9.219	9.193 (8.715-9.672)	1.30 (1.234-1.365)
Neoplasms	373 7.9%	6.911	6.499 (6.119-6.879)	1.04 (0.977-1.098)
Symptoms, Signs and Ill-defined Conditions	353 7.4%	6.528	6.456 (6.059-6.854)	1.26 (1.184-1.335)
Diseases of the Musculoskeletal System and Connective Tissue	249 5.2%	4.603	4.386 (4.065-4.708)	1.18 (1.097-1.266)
Diseases of the Genitourinary System	226 4.7%	4.184	4.042 (3.734-4.351)	1.06 (0.979-1.138)
Conditions Originating in the Perinatal Period	220 4.6%	4.072	6.077 (5.724-6.430)	1.18 (1.093-1.274)
Mental Disorders	202 4.2%	3.733	3.857 (3.537-4.177)	0.76 (0.696-0.817)
<b>Avg. Total Leading Causes % of Avg. TOTAL Male Hospital Separations</b>			<b>4,177 (87.7%)</b>	
<b>Avg. TOTAL Male Hospital Separations</b>			<b>4,765</b>	

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

**Key Findings:**

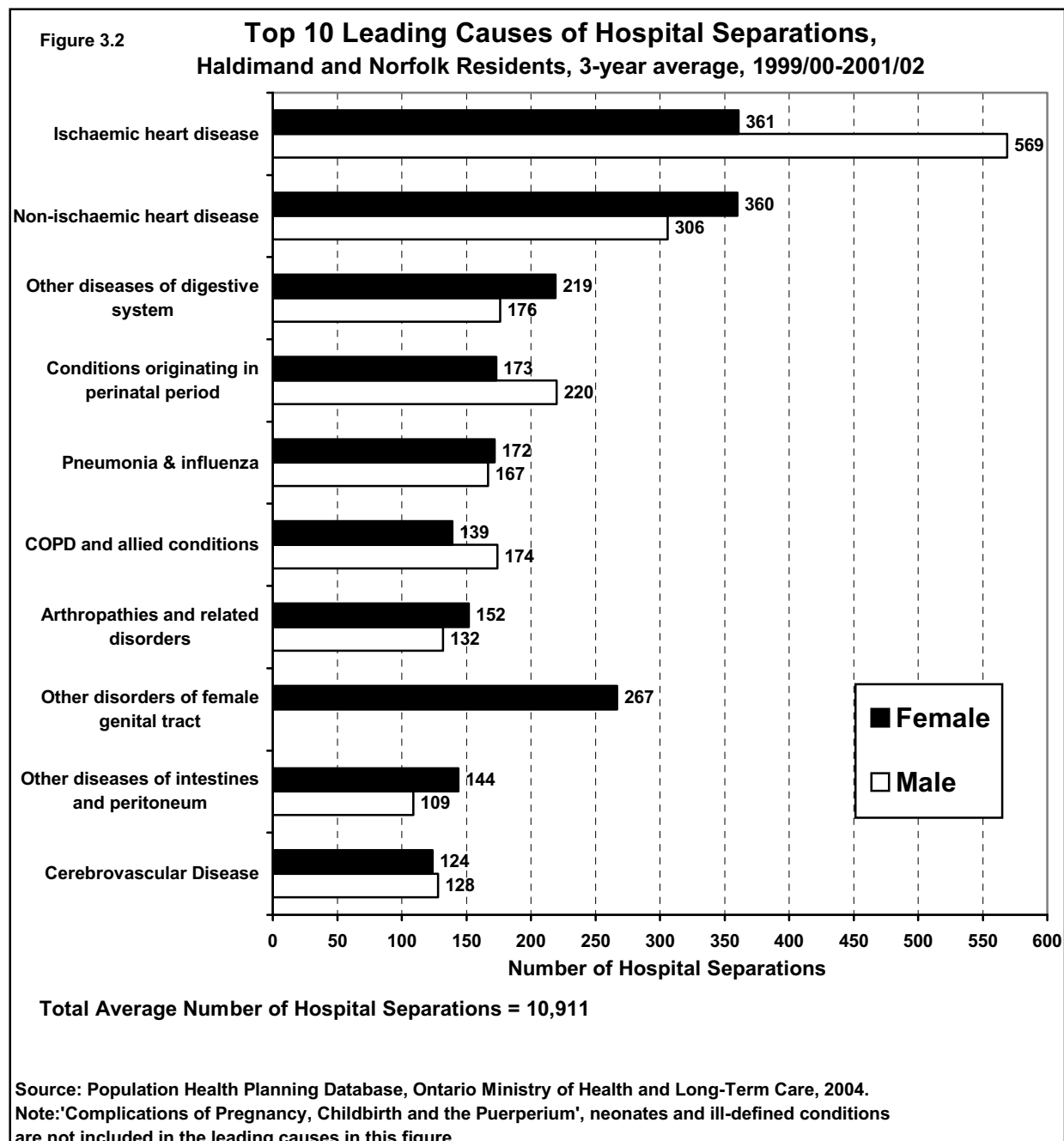
- Between 1999/00 and 2001/02, there were 14,293 hospitalizations for Haldimand and Norfolk males with an annual average of 4,764 hospitalizations.
- In this three-year period, 24% of all male hospitalizations were attributed to Diseases of the Circulatory System with another 22% attributed to Diseases of the Digestive (11%) and Respiratory (11%) Systems.
- The rates of male hospitalizations for all of the conditions listed in the table above were significantly higher from the provincial average, with the exception of Neoplasms (cancers), Diseases of the Genitourinary System and Mental Disorders. These rates ranged from being 7% higher for Diseases of the Digestive System to 30% higher for Injury.
- The rates of hospitalizations attributed to 'Mental Disorders' were 24% lower for male residents of Haldimand and Norfolk Counties, than their Ontario counterparts.

**Table 3.6: Top 10 Leading Major Classifications of Hospital Separations for Males, Haldimand and Norfolk Residents, 2002/03.**

Category (ICD-9 Chapter)	Number of Hospital Separations  Proportion of Male Number of Hospital Separations	Crude Rate per 1,000 of Hospital Separations	Standardized Rate per 1,000 of Hospital Separations (Confidence Intervals)
Diseases of the Circulatory System	1,020 22.0%	18.249	14.505 (13.627-15.383)
Diseases of the Digestive System	620 13.4%	11.244	9.954 (9.145-10.764)
Diseases of the Respiratory System	507 10.9%	9.194	8.536 (7.769-8.382)
Injury and Poisoning	483 10.4%	8.759	8.278 (7.512-9.044)
Neoplasms	339 7.3%	6.148	4.988 (4.455-5.521)
Symptoms, Signs and Ill-defined Conditions	336 7.3%	6.093	5.293 (4.708-5.877)
Diseases of the Genitourinary System	233 5.0%	4.225	3.559 (3.092-4.026)
Diseases of the Musculoskeletal System and Connective Tissue	213 4.6%	3.863	3.436 (2.959-3.913)
Mental Disorders	204 4.4%	3.700	3.541 (3.036-4.047)
Conditions Originating in the Perinatal Period	198 4.3%	3.554	5.171 (4.474-5.869)
<b>Total leading causes % of TOTAL Male hospital separations</b>		<b>4,153 9.7%</b>	
<b>TOTAL Male hospital separations</b>		<b>4,632</b>	

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.



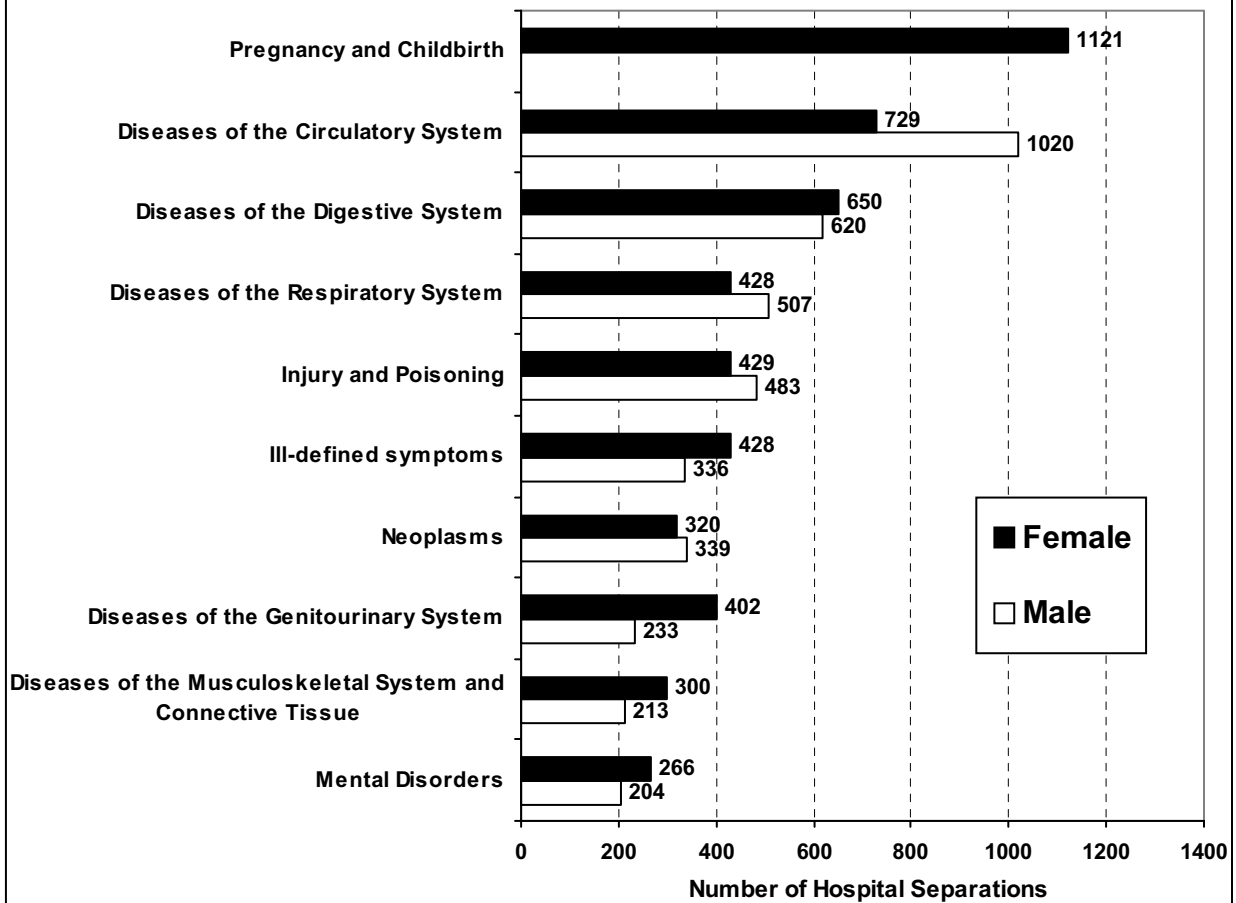


### Key Findings:

- Between 1999/00 and 2001/02, the top five specific leading causes of hospitalizations for residents of Haldimand and Norfolk included: ischaemic heart disease, non-ischaemic heart disease, various diseases of the digestive system, conditions originating in the perinatal period, and pneumonia and influenza. The annual average hospitalizations for the top ten leading specific causes of hospitalizations are shown in the figure above.

Figure 3.3

**Top 10 Leading Classifications of Hospital Separations,  
Haldimand and Norfolk Residents, 2002/03**



Total Average Number of Hospital Separations = 10,421

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

**Table 3.7: Top 11 Leading Major Classifications of Hospital Separations for Females, Haldimand and Norfolk Residents, 3-year average, 1999/00-2001/02.**

Category (ICD-9 Chapter)	Avg. Number of Hospital Separations  Avg. Proportion of Female Number of Hospital Separations	Avg. Crude Rate per 1,000 of Hospital Separations	Avg. Standardized Rate per 1,000 of Hospital Separations (Confidence Intervals)	Avg. Standardized Hospital Separation Ratio (Confidence Interval)
<i>Complications of Pregnancy, Childbirth and the Puerperium</i>	1,288 21.0%	23.709	33.006 (32.003-34.010)	1.08 (1.045-1.113)
Diseases of the Circulatory System	882 14.3%	16.233	12.168 (11.710-12.626)	1.28 (1.233-1.331)
Diseases of the Digestive System	621 10.1%	11.440	10.223 (9.743-10.703)	1.26 (1.201-1.315)
Neoplasms	477 7.8%	8.789	7.318 (6.934-7.703)	1.11 (1.053-1.168)
Injury and Poisoning	450 7.3%	8.279	7.078 (6.688-7.468)	1.19 (1.127-1.255)
Diseases of the Respiratory System	443 7.2%	8.150	7.325 (6.919-7.732)	1.19 (1.128-1.257)
Diseases of the Genitourinary System	439 7.2%	8.089	7.930 (7.484-8.376)	1.23 (1.161-1.294)
Symptoms, Signs and Ill-defined Conditions	385 6.2%	7.089	6.312 (5.934-6.669)	1.26 (1.183-1.328)
Diseases of the Musculoskeletal System and Connective Tissue	285 4.7%	5.247	4.440 (4.135-4.745)	1.13 (1.052-1.204)
Mental Disorders	226 3.7%	4.161	3.895 (3.589-4.201)	0.73 (0.671-0.781)
Conditions Originating in the Perinatal Period	173 2.8%	3.179	4.536 (4.211-4.860)	1.05 (0.961-1.143)
<b>Avg. Total leading causes (excl. pregnancy and childbirth)</b>			<b>4,381</b>	
<b>% of Avg. TOTAL Female hospital separations (excl. pregnancy and childbirth)</b>			<b>(90.2%)</b>	
<b>Avg. TOTAL Female hospital separations</b>			<b>6,146</b>	

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

**Key Findings:**

- Between 1999/00 and 2001/02, there were 18,435 hospitalizations for Haldimand and Norfolk females, with an annual average of 6,145 hospitalizations.
- In this three-year period, 21% of all female hospitalizations were attributed to 'Complications of Pregnancy, Childbirth, and the Puerperium'. The second leading general category of hospitalizations was attributed to 'Diseases of the Circulatory System' (14%), followed by Diseases of the Digestive System (10%) and Neoplasms (8%).
- The rates of female hospitalizations for all of the conditions listed in the table above were significantly higher from the provincial average, with the exception of 'Conditions originating in the perinatal period'. These rates ranged from being 8% higher for 'Complications of pregnancy, childbirth and the puerperium' to being 28% higher for 'Diseases of the Circulatory System'.
- The rates of hospitalizations attributed to 'Mental Disorders' were 27% lower for female residents of Haldimand and Norfolk Counties, than their Ontario counterparts.

**Table 3.8: Top 11 Leading Major Classifications of Hospital Separations for Females, Haldimand and Norfolk Residents, 2002/03.**

Category (ICD-9 Chapter)	Number of Hospital separations  Proportion of Female Number of Hospital Separations	Crude Rate per 1,000 of Hospital Separations	Standardized Rate per 1,000 of Hospital Separations (Confidence Intervals)
<i>Complications of Pregnancy, Childbirth and the Puerperium</i>	1,121 19.4%	24.719	22.103 (20.841-23.365)
Diseases of the Circulatory System	729 12.6%	13.013	10.503 (9.754-11.253)
Diseases of the Digestive System	650 11.2%	11.762	10.611 (9.779-11.444)
Injury and Poisoning	429 7.4%	7.763	6.927 (6.259-7.596)
Symptoms, Signs and Ill-defined Conditions	428 7.4%	7.745	6.898 (6.230-7.566)
Diseases of the Respiratory System	428 7.4%	7.744	7.181 (6.486-7.876)
Diseases of the Genitourinary System	402 6.9%	7.274	7.101 (6.383-7.820)
Neoplasms	320 5.5%	5.791	4.956 (4.409-5.502)
Diseases of the Musculoskeletal System and Connective Tissue	300 5.2%	5.429	4.735 (4.919-5.279)
Mental Disorders	266 4.6%	4.813	4.828 (4.227-5.430)
Diseases of the Blood and Blood-forming organs and certain disorders involving the immune mechanism	160 2.8%	2.900	2.757 (2.316-3.197)
<b>Total leading causes (excl. pregnancy and childbirth)</b>		<b>4,112</b>	
<b>% of TOTAL Female hospital separations (excl. pregnancy and childbirth)</b>		<b>71%</b>	
<b>TOTAL Female hospital separations</b>		<b>5,787</b>	

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

**Table 3.9 : Top 5 Leading Major Classifications of Hospitalizations, for Children aged 0-4, Haldimand and Norfolk (HN) Residents, 3-year average, 1999/00-2001/02.**

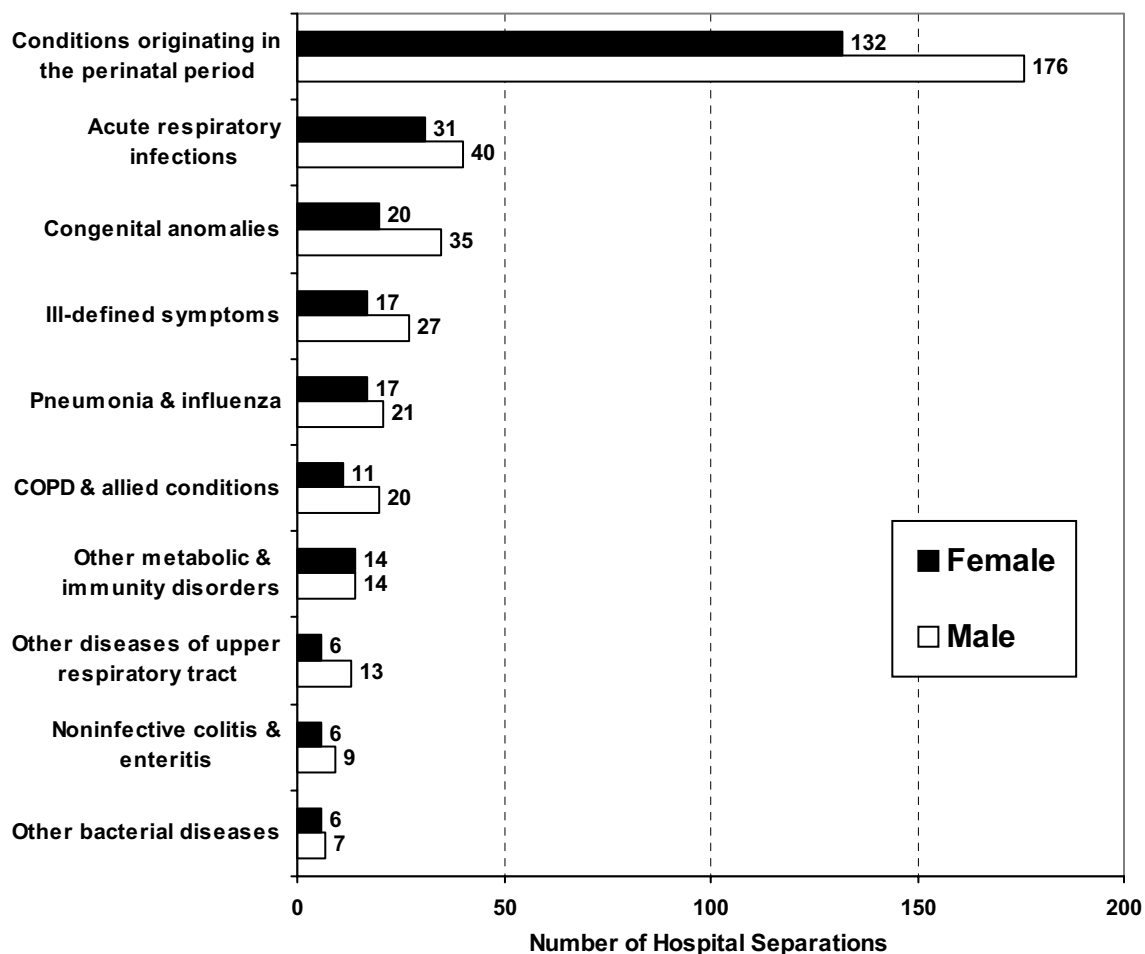
	Conditions originating in perinatal period	Diseases of the Respiratory System	Congenital anomalies	Symptoms, signs and ill-defined conditions	Injury and poisoning
<b>Males (Total average number = 425)</b>					
<b>Avg. #</b>	176	95	35	30	18
<b>Avg. %</b>	41.4%	22.4%	8.2%	7.1%	4.2%
<b>Age-specific rate</b>					
<1	420.4	72.9	56.3	33.9	6.4
1-4	-	24.7	2.3	5.2	6.2
<b>Females (Total average number = 308)</b>					
<b>Avg. #</b>	132	68	20	19	14
<b>Avg. %</b>	42.9%	22.1%	6.5%	6.2%	4.5%
<b>Age-specific rate</b>					
<1	312.4	51.8	30.5	25.0	3.0
1-4	0.13	15.8	1.2	2.1	5.1
<b>Total average hospitalizations for children 0-4</b>	307	163	54	49	32
	41.9%	22.2%	7.4%	6.7%	4.4%

*Note: Healthy Neonates are excluded from this table.*

**Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.**

Figure 3.4

**Leading Causes of Hospital Separations, for Children**  
Aged 0-4, by Sex, Haldimand and Norfolk Residents, 3-year average, 1999/00-2001/02



Total Average Number of Hospital Separations = 727

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

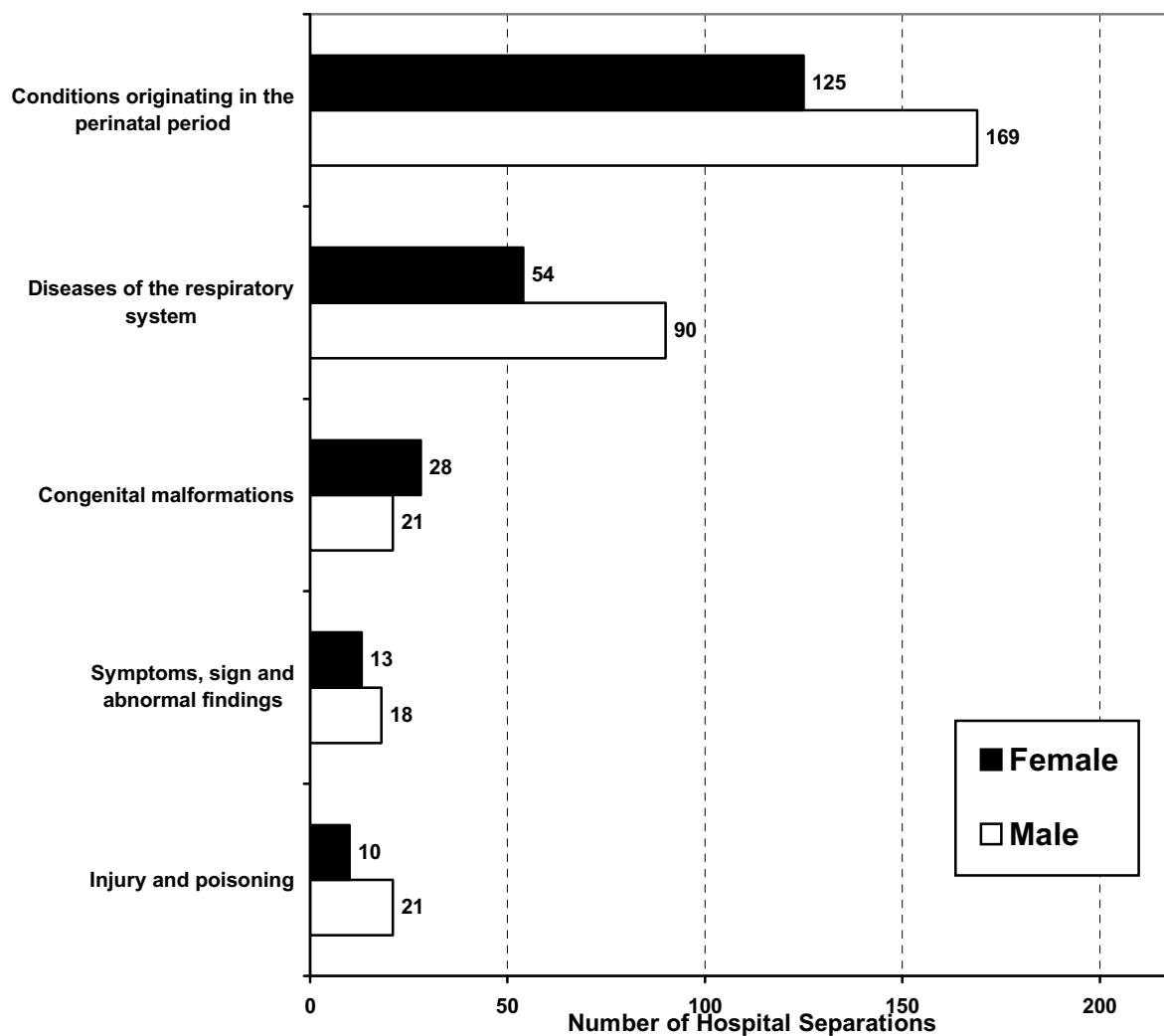
### Key Findings:

- Between 1999/00 and 2001/02, 'Conditions originating in the perinatal period' were the leading category of hospitalization for Haldimand and Norfolk children aged 0-4 (healthy neonates excluded). These hospitalizations accounted for, on average, 42% of all hospitalizations for the children in this age group. The types of conditions included in this category were: preterm infants (25%), respiratory conditions of fetus and newborn (22%), infections specific to perinatal period (10%) and syndrome of 'infant of a diabetic mother' (8%).

- During this three-year time period, 'Diseases of the Respiratory System', the second leading category of hospitalizations, accounted for an average of 22% of all hospitalizations for children aged 0-4 (healthy neonates excluded). There were on average 62 hospitalizations per 1,000 infants and 20 hospitalizations per 1,000 children aged 1-4 attributed to respiratory diseases. Acute bronchitis accounted for 71% of the conditions classified as 'acute respiratory infections', the second leading specific cause of hospitalizations for children in this age group. Acute laryngitis and acute laryngopharyngitis accounted for another 15% and 13%, respectively.
- 'Congenital Anomalies', the third leading category of hospitalizations for children aged 0-4, accounted for 7% of the total hospitalizations for children in this age group. On average, there were 43 hospitalizations per 1,000 infants and 2 hospitalizations per 1,000 children aged 1-4 attributed to this category of hospitalizations. Nearly three-quarters of these hospitalizations were attributed to the following congenital anomalies: musculoskeletal deformities (18%), upper alimentary tract (15%), genital organs (10%), urinary tract (9%), limbs (7%) and common truncus (6%).
- There were on average 29 hospitalizations per 1,000 infants and 4 hospitalizations per 1,000 children aged 1-4 attributed to 'Symptoms, Signs and Ill-defined conditions'. Various general symptoms (36%), symptoms concerning nutrition, metabolism and development (16%), dyspnoea and respiratory abnormalities (12%), symptoms involving cardiovascular system (10%) and symptoms involving abdomen and pelvis (8%) accounted for the majority of hospitalizations under this classification.
- 'Injury and Poisoning', the fifth leading category of hospitalizations for children aged 0-4, accounted for 4% of the total hospitalizations for this age group. There were, on average, 5 hospitalizations per 1,000 infants and 6 hospitalizations per 1,000 children aged 1-4 attributed to this category. Common injuries included: intracranial injury (14%), and fractures of humerus (13%) and radius and ulna (10%).



Figure 3.5

**Five Leading Classifications of Hospital Separations, for Children Aged 0-4, by Sex, Haldimand and Norfolk Residents, 2002/03**

Total Average Number of Hospital Separations = 649

Note: healthy neonates excluded

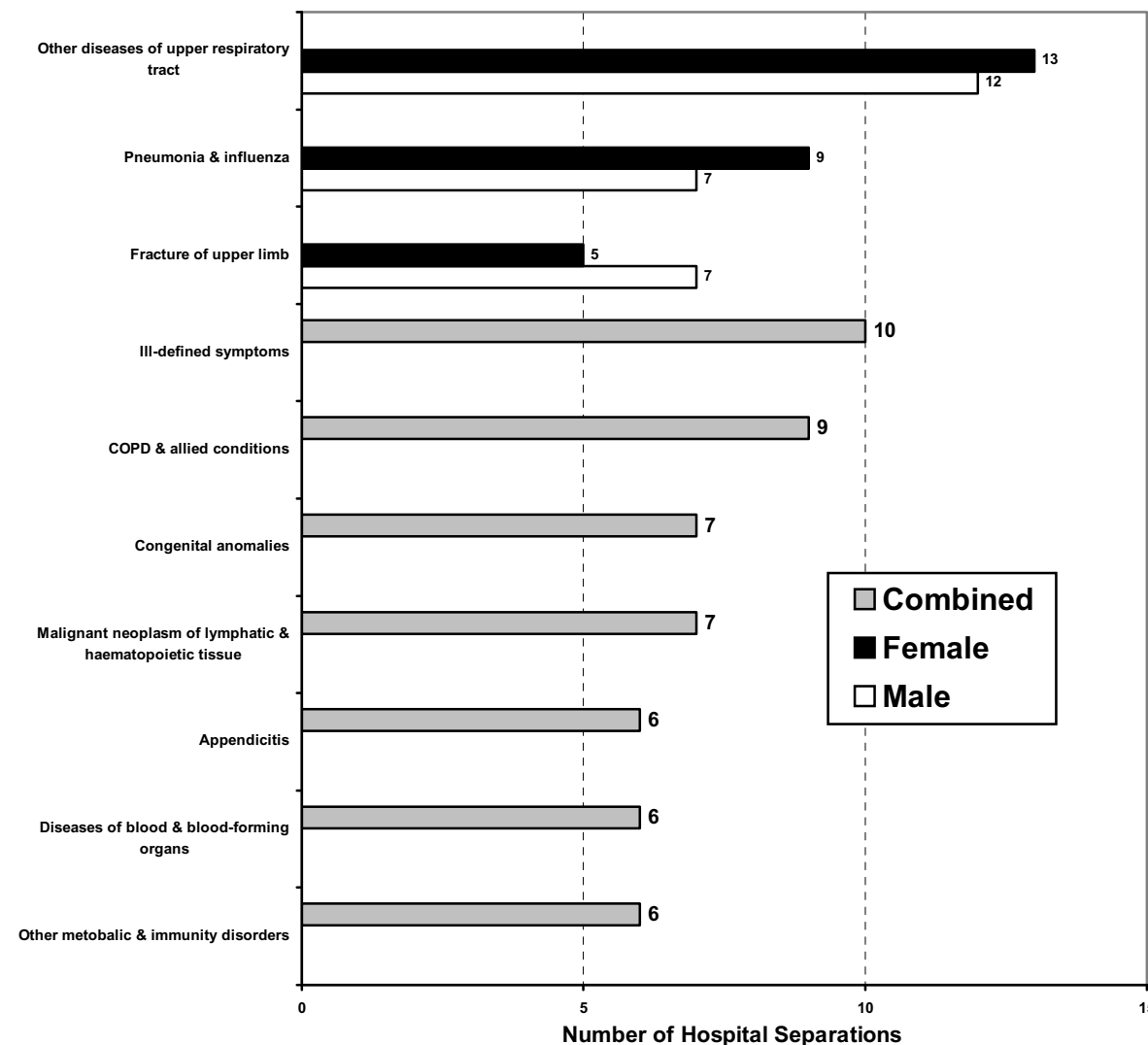
Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

**Table 3.10 : Top 5 Leading Major Classifications of Hospitalizations, for Children aged 5-9, Haldimand and Norfolk (HN) Residents, 3-year average, 1999/00-2001/02.**

	Diseases of the Respiratory System	Injury and poisoning	Diseases of the Digestive System	Symptoms, signs and ill-defined conditions	Infectious and Parasitic Diseases
<b>Males (Total average number = 97)</b>					
<b>Avg. #</b>	27	19	8	5	5
<b>Avg. %</b>	27.8%	19.6%	8.2%	5.2%	5.2%
<b>Age-specific rate</b>	7.0	4.7	2.2	1.2	1.4
<b>Females (Total average number = 82)</b>					
<b>Avg. #</b>	28	14	7	7	5
<b>Avg. %</b>	34.1%	17.1%	8.5%	8.5%	6.1%
<b>Age-specific rate</b>	7.6	3.7	2.0	1.8	1.3
<b>Total average hospitalizations for children 5-9</b>	55	32	16	11	10
	30.6%	17.8%	8.9%	6.1%	5.6%

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

**Figure 3.6** **Leading Causes of Hospital Separations, for Children**  
**Aged 5-9, by Sex, Haldimand and Norfolk Residents, 3-year average, 1999/00-**  
**2001/02**



**Total Average Number of Hospital Separations = 180**

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

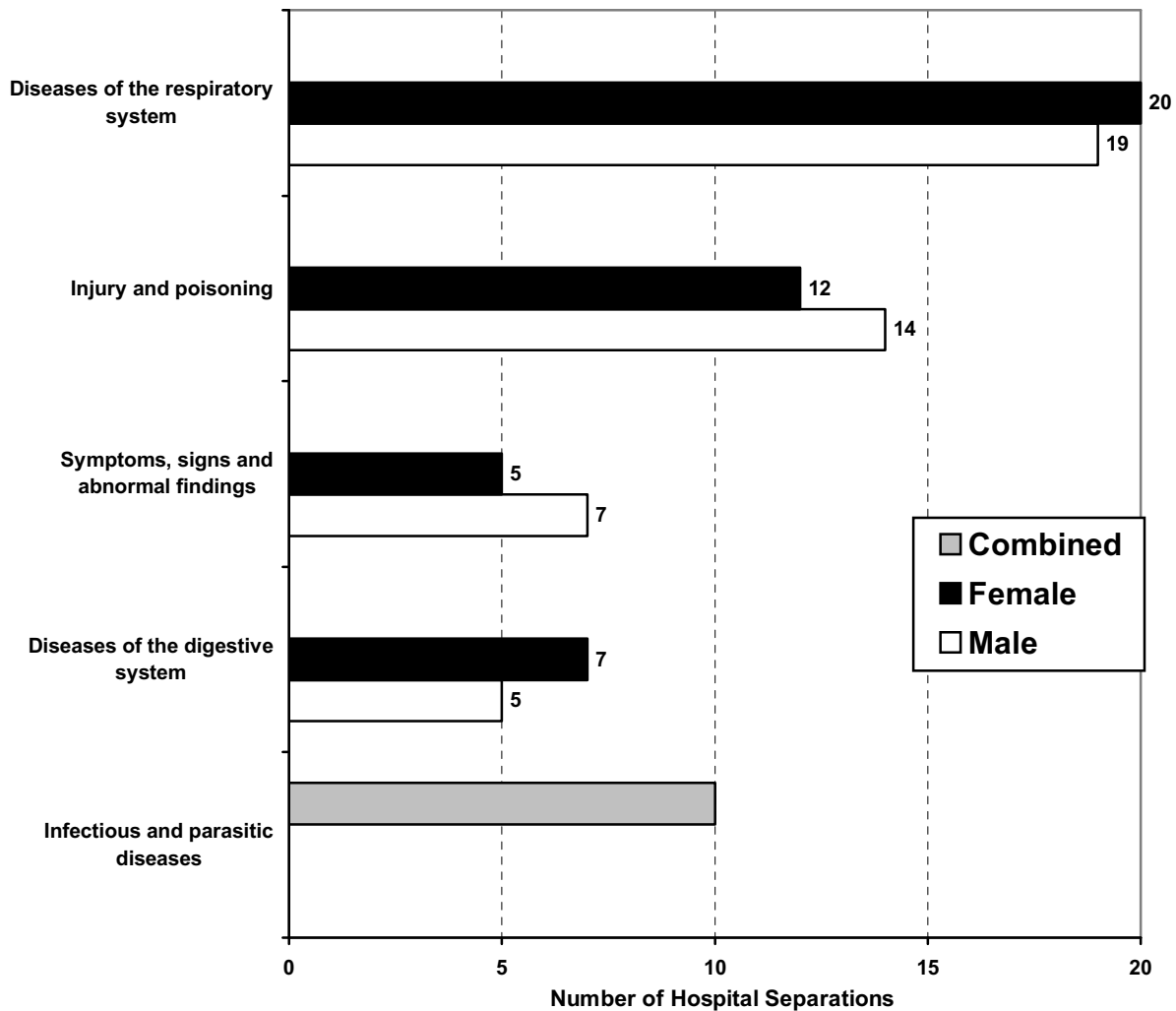
**Key Findings:**

- Between 1999/00 and 2001/02, ‘Diseases of the Respiratory System’ were the leading category of hospitalizations for Haldimand and Norfolk children aged 5-9. These hospitalizations accounted for, on average, 31% of all hospitalizations for children in this age group. There were on average 7 hospitalizations per 1,000 children aged 5-9 attributed to respiratory diseases. The types of conditions

included in this category were: chronic disease of tonsils and adenoids (43%), pneumonia (25%) and asthma (15%).

- During this time period, 'Injury and Poisoning', the second leading category of hospitalizations, accounted for an average of 18% of all hospitalizations for children in this age group. There were on average 4 hospitalizations per 1,000 children aged 5-9 attributed to injuries. A third of the injuries for children in this age group were attributed to fractures of humerus (15%) and radius and ulna (20%).
- 'Diseases of the Digestive System', the third leading category of hospitalizations for children aged 5-9, accounted for 9% of the total hospitalizations for this age group. There were on average 2 hospitalizations per 1,000 children aged 5-9 attributed to this category of diseases. Specifically, acute appendicitis (40%) and noninfective gastroenteritis (32%) comprised the majority of the hospitalizations in this category.
- 'Symptoms, Signs and Ill-defined Conditions' were the fourth leading category of hospitalizations for children aged 5-9. This category accounted for 6% of the total hospitalizations for children in this age group, with an average rate of 2 hospitalizations per 1,000 children aged 5-9 each year. Various symptoms (32%) and symptoms involving the abdomen and pelvis (26%) accounted for the majority of the hospitalizations classified as 'Ill defined symptoms', the fourth leading specific cause of hospitalizations for 5-9 year olds.
- 'Infectious Disease', the fifth leading category of hospitalizations for children aged 5-9, accounted for 6% of the total hospitalizations for this age group with an average rate of 1 hospitalization per 1,000 5-9 year olds. A third of the hospitalizations in this classification were due to intestinal infection and chickenpox.

**Figure 3.7 Five Leading Classifications of Hospital Separations, for Children Aged 5-9, by Sex, Haldimand and Norfolk Residents, 2002/03**



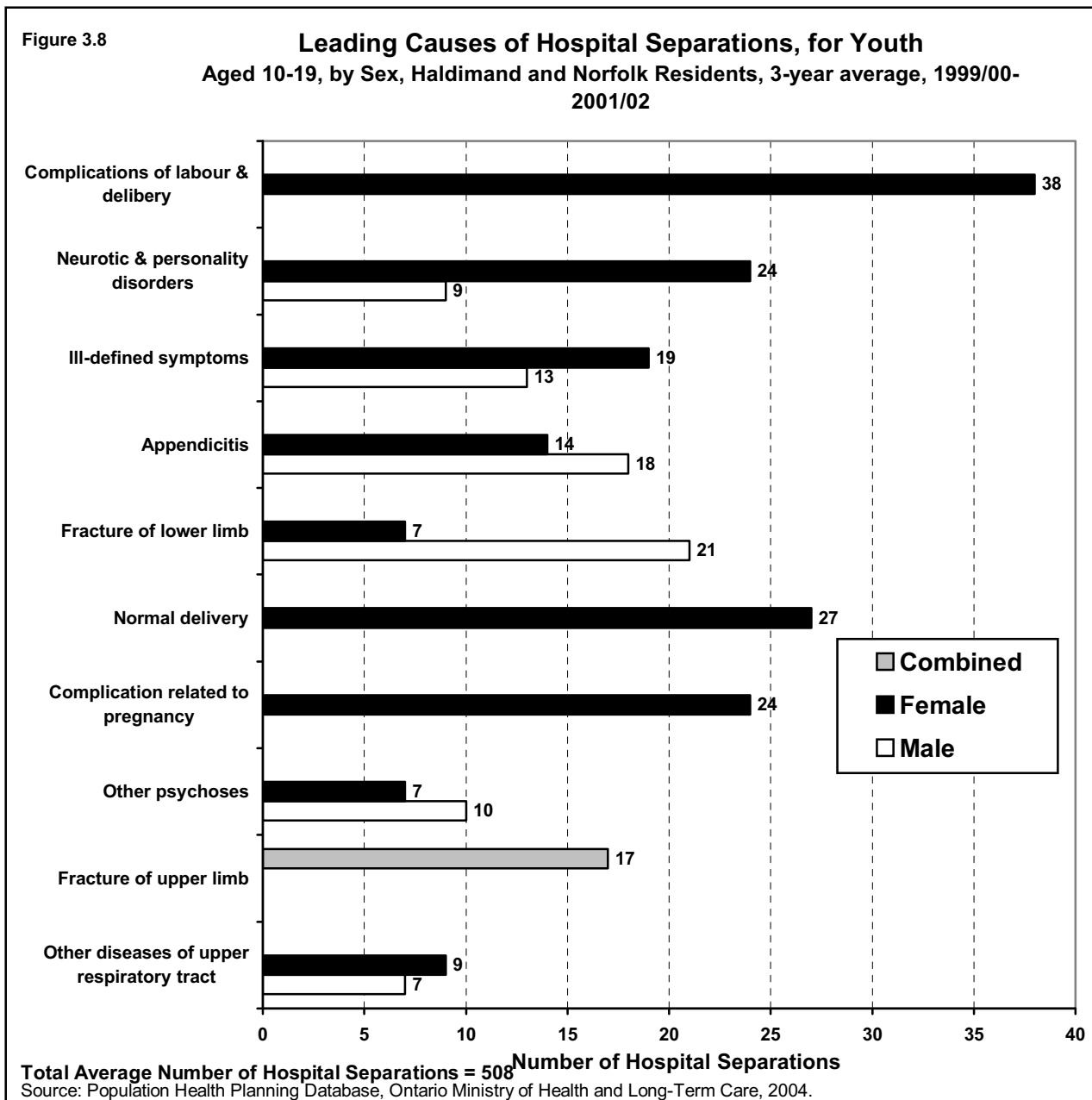
**Total Average Number of Hospital Separations = 135**

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

Table 3.11 : Top 5 Leading Major Classifications of Hospitalizations, for Youth aged 10-19, Haldimand and Norfolk (HN) Residents, 3-year average, 1999/00-2001/02.

	Injury and poisoning	Complications of pregnancy, childbirth and the puerperium	Diseases of the Digestive System	Mental disorders	Diseases of the Respiratory System
<b>Males (Total average number = 212)</b>					
<b>Avg. #</b>	77	N/A	27	19	17
<b>Avg. %</b>	36.3%		12.7%	9.0%	8.0%
<b>Age-specific rate</b>					
10-14	6.8	N/A	2.7	0.62	1.2
15-19	10.6		3.5	3.7	2.6
<b>Females (Total average number = 296)</b>					
<b>Avg. #</b>	34	92	34	32	19
<b>Avg. %</b>	11.5%	31.1%	11.5%	10.8%	6.4%
<b>Age-specific rate</b>					
10-14	3.5	-	3.1	1.7	1.6
15-19	5.0	22.5	5.3	6.1	3.2
<b>Total average hospitalizations for youth 10-19</b>	111	92	61	51	36
	21.9%	18.1%	12.0%	10.0%	7.1%

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.



**Key Findings:**

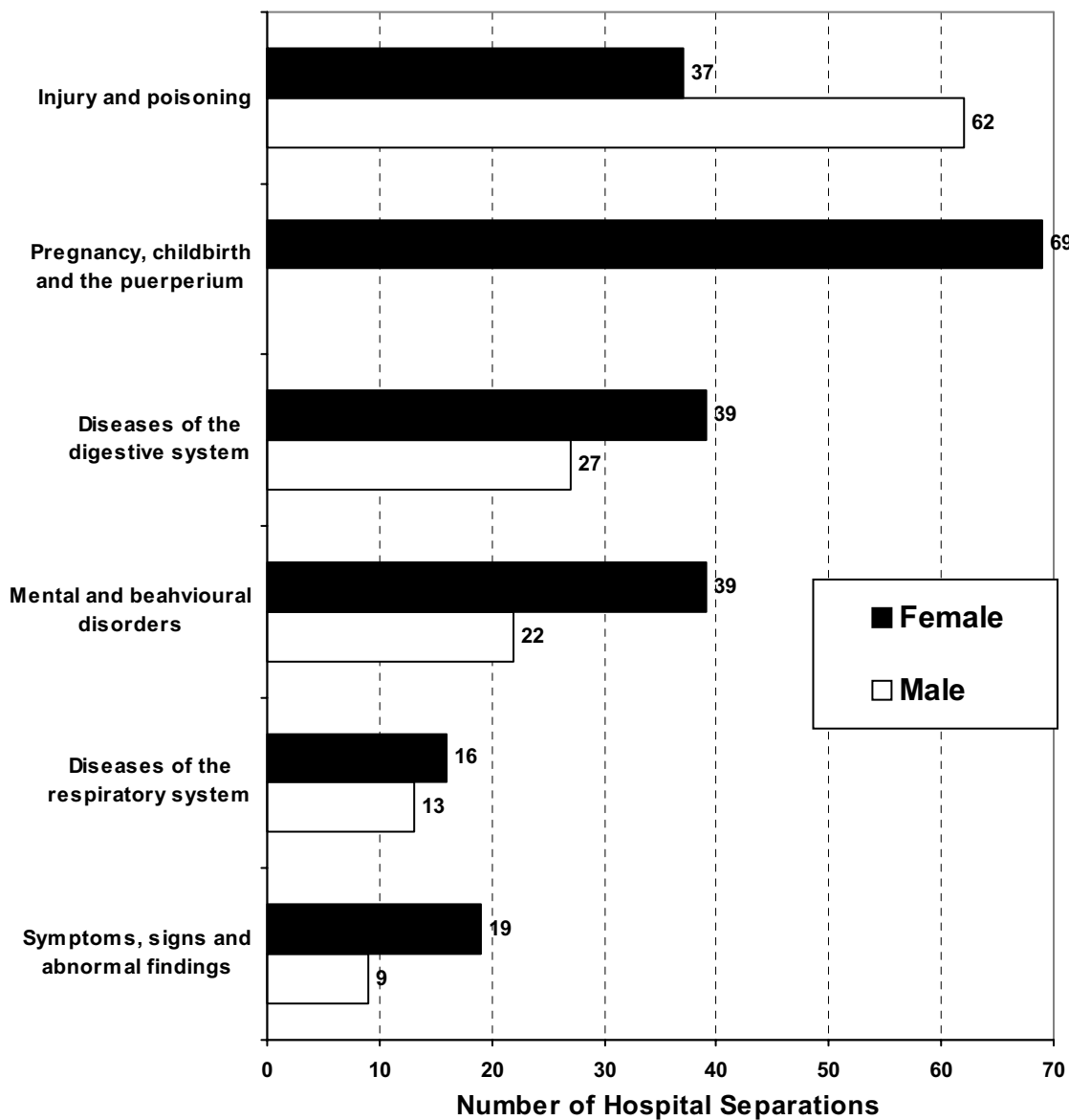
- Between 1999/00 and 2001/02, the five leading categories of hospitalizations for Haldimand and Norfolk youth aged 10-19 were: 'Injury and Poisoning' (22%), 'Complications of pregnancy, childbirth and the puerium' (18%), 'Diseases of the Digestive System' (12%), 'Mental Disorders' (10%) and 'Diseases of the Respiratory System' (7%). These five broad categories accounted for 69% of all hospitalizations in this age group.

- 'Injury and Poisoning' were the top leading cause of hospitalizations for youth in this age group, with an average of 7 hospitalizations per 1,000 youth aged 10-19. The most common injuries for youth aged 10-19 included fractures of ankle (13%); radius and ulna (11%); tibia and fibula (7%); poisonings by opiates (5%), and complications of medical and surgical procedures (5%).
- 'Complications of Pregnancy, Childbirth and the Puerperium' were the leading cause of hospitalizations for females in this age group, accounting for 31% of the total female hospitalizations. On average, each year, there were 22 hospitalizations per 1,000 females aged 10-19 each year attributed to this category.
- 'Diseases of the Digestive System', the third leading category of hospitalizations accounted for 12% of the total hospitalizations for youth aged 10-19, with an average rate of 4 per 1,000 10-19 year olds. The most common conditions, under this classification of hospitalizations, included: acute appendicitis (48%), major anomalies of jaw line (13%) and noninfective gastroenteritis (6%).
- 'Mental Disorders' accounted for an average of 10% of the total hospitalizations for youth in this age group with an average rate of 3 hospitalization per 1,000 youth aged 10-19. The second and eight leading specific causes of hospitalizations - neurotic and personality disorders and other psychoses - accounted for an average of 10% of all hospitalizations for youth aged 10-19. Specifically, manic-depressive psychoses (22%), neurotic neurotic disorders (12%), adjustment reaction (11%) and nondependent substance abuse (10%) accounted for over half of all the hospitalizations under the classification of 'Mental Disorders'.
- The fifth leading category of hospitalizaions for this age group were 'Diseases of the Respiratory System'. This category accounted for 7% of the total hospitalizations for 10-19 years olds with an average rate of 2 hospitalizations per 1,000 youth. Annually, the most common conditions included: chronic disease of tonsils and adenoids (35%), pneumonia (14%), asthma (10%) and pneumothorax (9%).
- Symptoms involving the abdomen and pelvis accounted for, annually on average, 54% of hospitalizations classified as 'Ill defined symptoms', the third leading specific cause of hospitaliations for this age group.



Figure 3.9

**Six Leading Classifications of Hospital Separations, for Youth  
Aged 10-19, by Sex,  
Haldimand and Norfolk Residents, 2002/03**



**Total Average Number of Hospital Separations = 468**

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

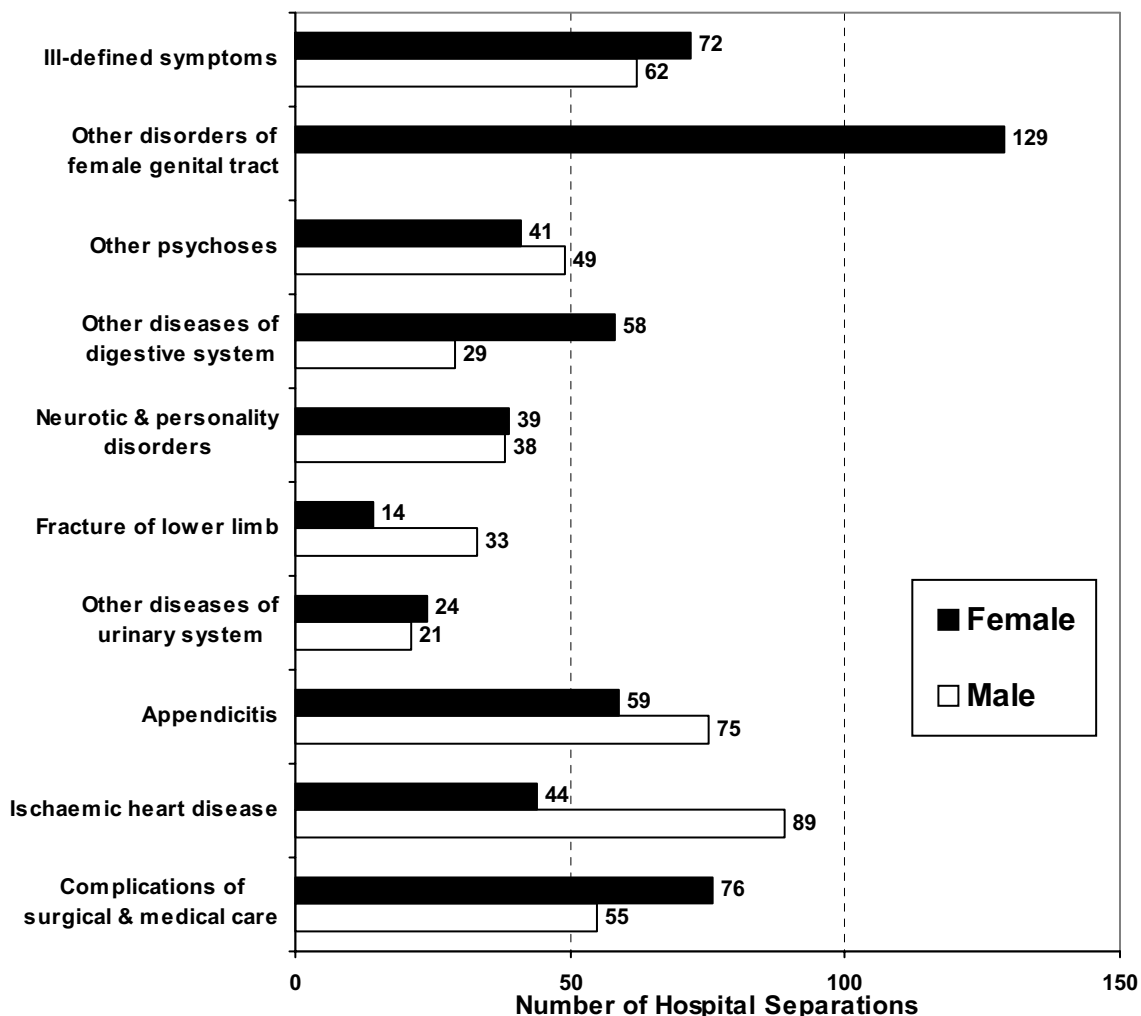
**Table 3.12 : Top 6 Leading Major Classifications of Hospitalizations, for Adults aged 20-44, Haldimand and Norfolk (HN) Residents, 3-year average, 1999/00-2001/02.**

	Complications of pregnancy, childbirth and the puerperium	Diseases of the Digestive System	Injury and poisoning	Diseases of the Genitourinary System	Mental disorders	Symptoms, signs and ill-defined conditions
<b>Males (Total average number = 693)</b>						
<b>Avg. #</b>	N/A	112	142	29	95	64
<b>Avg. %</b>		16.2%	20.5%	4.2%	13.7%	9.2%
<b>Age-specific rate</b>	N/A					
20-24		4.1	8.8	0.73	3.3	1.8
25-34		6.4	7.8	1.3	5.5	3.1
35-44		6.7	7.1	2.1	5.7	4.3
<b>Females (Total average number = 2,032)</b>						
<b>Avg. #</b>	1,195	148	86	186	82	74
<b>Avg. %</b>	43.9%	7.3%	4.2%	9.2%	4.0%	3.6%
<b>Age-specific rate</b>						
20-24	81.0	8.7	4.1	4.2	2.5	2.9
25-34	127.2	8.1	3.7	10.9	4.5	4.1
35-44	18.5	7.8	5.6	12.1	5.2	4.4
<b>Total average hospitalizations for adults 20-44</b>	1,195	260	228	216	177	137
	43.9%	9.5%	8.4%	7.9%	6.5%	5.0%

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

Figure 3.10

**Leading Causes of Hospital Separations, for Adults**  
 Aged 20-44, by Sex, Haldimand and Norfolk Residents, 3-year average, 1999/00-2001/02



**Total Average Number of Hospital Separations = 2,724**  
 Hospitalizations attributed to 'Complications of Pregnancy, Childbirth and the Puerperius are excluded from this figure.

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

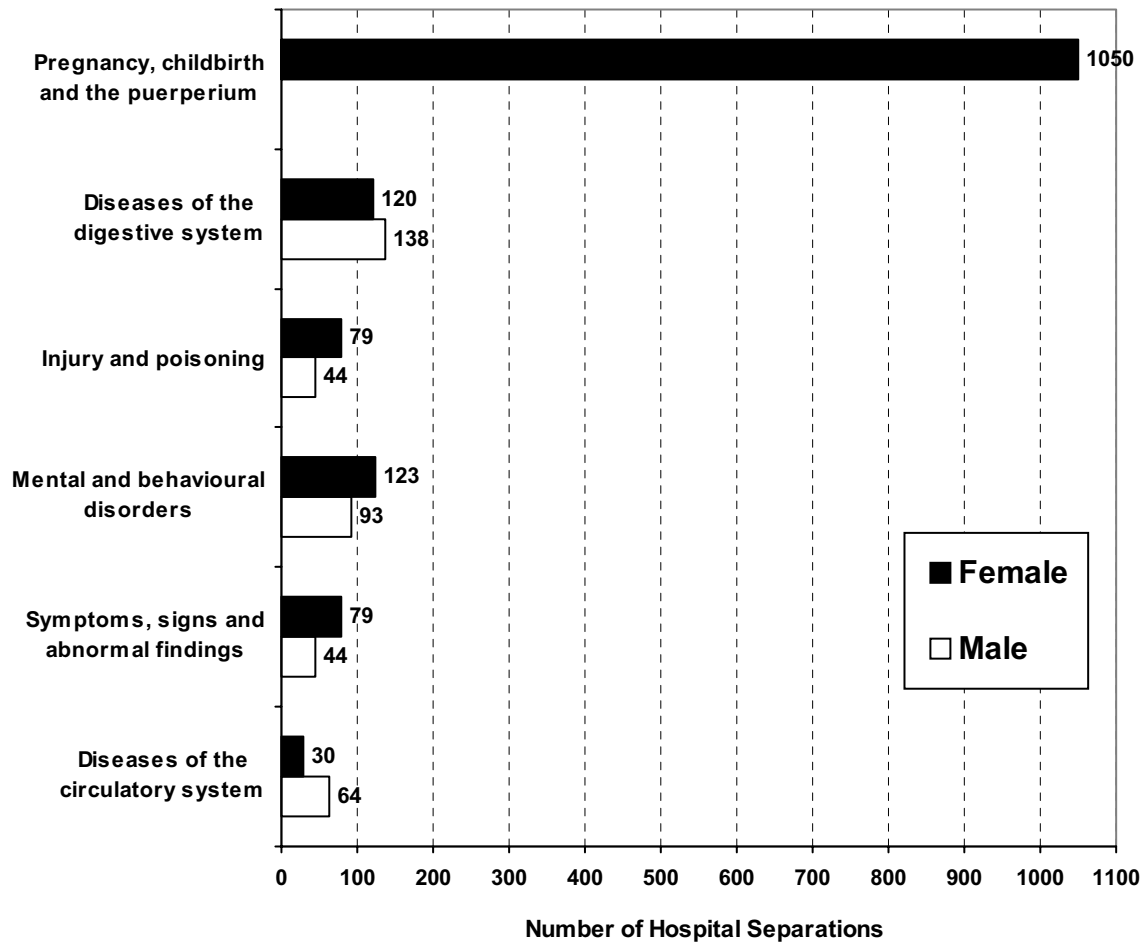
**Key Findings:**

- Between 1999/00 and 2001/02, 'Complications of Pregnancy, Childbirth and the Puerperium' were the leading category of hospitalizations for Haldimand and Norfolk adults aged 20-44 and the leading category of hospitalizations for females in this age group. This category accounted for, on average, 44% of the total

hospitalizations for this age group and 59% of all female hospitalizations. There were on average 1,195 hospitalizations attributed to this category each year.

- 'Diseases of the Digestive System' accounted for 10% of the total hospitalizations for 20-44 year olds, with an average rate of 7 hospitalizations per 1,000 adults in this age group. The leading conditions classified under this category included: cholelithiasis (21%), acute appendicitis (15%), regional enteritis (7%), noninfective gastroenteritis and colitis (6%), diseases of pancreas (5%) and hernia of abdominal cavity (4%).
- 'Injury and Poisoning', the third leading category of hospitalizations for 20-44 year olds, accounted for 8% of the total hospitalizations with an average rate of 6 hospitalizations per 1,000 per adults aged 20-44. Complications of surgical and medical care accounted for 19% of this category. Specifically, this category was comprised of complications of procedures (56%), mechanical complications of medical devices (31%) and complications affecting various body system (12%). Another 26% of the 'Injury and Poisoning' category was accounted for by fractures of the following: ankle (9%), radius and ulna (5%), tibia and fibula (4%), calcaneus (4%) and intracranial injury (4%). And, 9% of the hospitaliations in this category were attributed to poisonings by opiates and related narcotics (3%) and psychotropic agents (6%).
- The fourth leading category of hospitalizations, 'Disease of the Genitourinary System', accounted for 8% of the total hospitalizations with an average rate of 5 hospitalizations per 1,000 adults aged 20-44. The main conditions included: absence of menstruation (23%), follicular cyst of ovary (12%), endometriosis (11%), calculus of kidney and ureter (11%) and disorders of breast (10%).
- 'Mental Disorders', the fifth leading category of hospitalizations, accounted for an average of 6% of all hospitalizations for adults aged 20-44 with an average rate of 4 hospitalizations per 1,000 adults aged 20-44.
- In this three-year time period, psychoses and neurotic and personality disorders, the third and fifth leading specific causes of hospitalizations for adults aged 20-44, accounted for 95% of this category and 6% of the total hospitalizations for adults in this age group. Specifically, manic-depressive psychoses (36%), neurotic disorders (12%), schizophrenic psychoses (10%), adjustment reaction (8%) and depressive disorder (6%) comprised close to three-quarters of the hospitalizations classified as 'Mental Disorders'.
- 'Symptoms, Signs and Ill-defined Conditions' accounted for 5% of the total hospitalizations for adults aged 20-44, with an average rate of 3 hospitalizations per 1,000 in this age group. Symptoms involving the abdomen and pelvis accounted for 41% of hospitalizations classified as 'Ill defined symptoms', the leading specific cause of hospitalizations for this age group ('Complications of Pregnancy, Childbirth and the Puerperium' excluded). Another 41% of this category was accounted by dyspnoea and respiratory abnormalities (28%) and various general symptoms (13%).

**Figure 3.11 Six Leading Classifications of Hospital Separations, for Adults Aged 20-44, by Sex, Haldimand and Norfolk Residents, 2002/03**



**Total Average Number of Hospital Separations = 2,525**

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

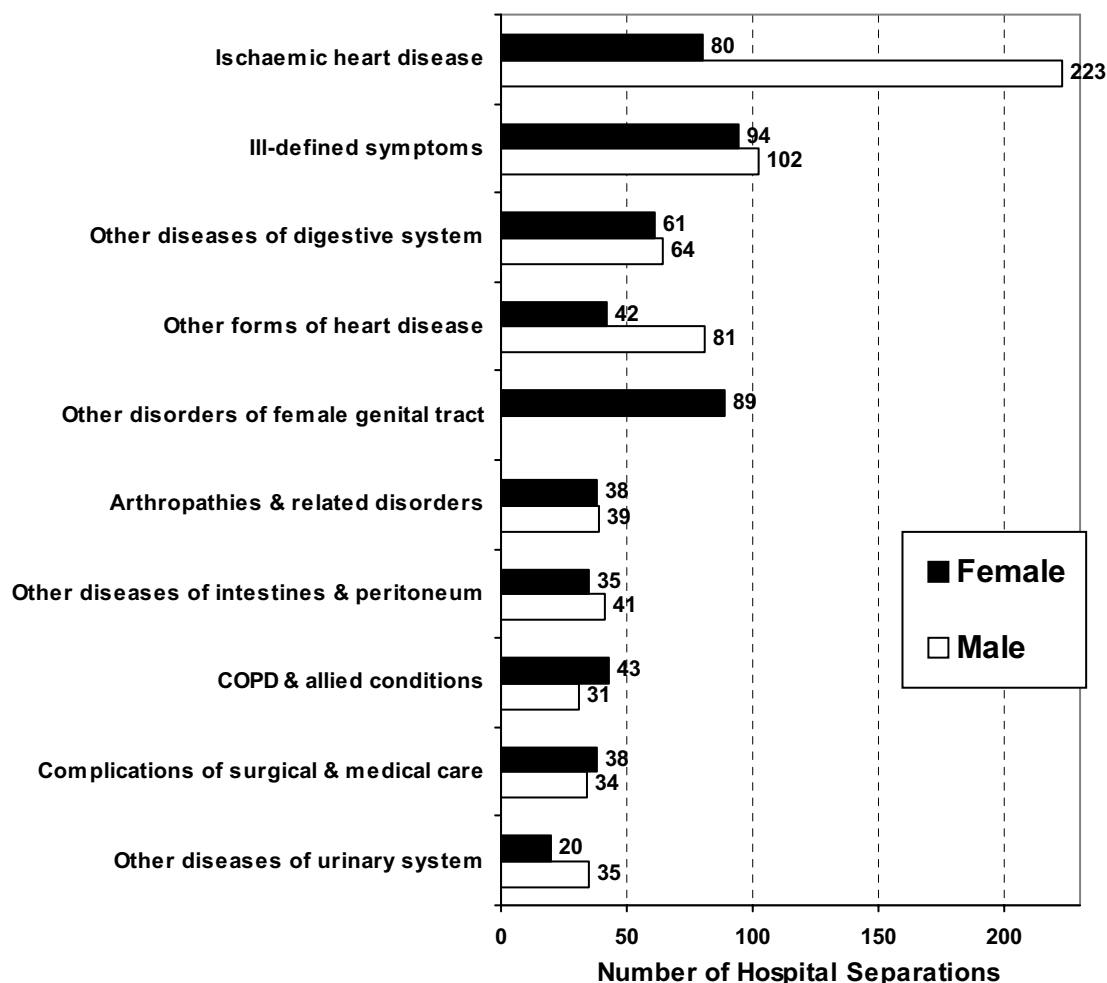
Table 3.13 : Top 5 Leading Major Classifications of Hospitalizations, for Adults aged 45-64, Haldimand and Norfolk (HN) Residents, 3-year average, 1999/00-2001/02.

Average Number Average Proportion	Diseases of the Circulatory System	Diseases of the Digestive System	Neoplasms	Signs, symptoms and ill-defined conditions	Injury and Poisoning
<b>Males (Total average number = 1,233)</b>					
<b>Avg. #</b>	<b>374</b>	<b>176</b>	<b>114</b>	<b>108</b>	<b>107</b>
<b>Avg. %</b>	<b>30.3%</b>	<b>14.3%</b>	<b>9.2%</b>	<b>8.8%</b>	<b>8.7%</b>
<b>Age-specific rate</b>					
45-54	19.2	10.2	5.3	6.5	7.2
55-64	41.0	17.6	13.4	10.4	9.1
<b>Females (Total average number = 1,136)</b>					
<b>Avg. #</b>	<b>167</b>	<b>160</b>	<b>188</b>	<b>101</b>	<b>92</b>
<b>Avg. %</b>	<b>14.7%</b>	<b>14.1%</b>	<b>16.5%</b>	<b>8.9%</b>	<b>8.1%</b>
<b>Age-specific rate</b>					
45-54	6.8	10.4	12.3	6.8	6.3
55-64	21.7	15.4	17.9	9.2	8.3
<b>Total average hospitalizations for adults 45-64</b>	<b>540</b>	<b>337</b>	<b>302</b>	<b>209</b>	<b>198</b>
	<b>22.8%</b>	<b>14.2%</b>	<b>12.7%</b>	<b>8.8%</b>	<b>8.4%</b>

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

Figure 3.12

**Leading Causes of Hospital Separations, for Adults Aged 45-64, by Sex, Haldimand and Norfolk Residents, 3-year average, 1999/00-2001/02**



**Total Average Number of Hospital Separations = 2,369**

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

**Key Findings:**

- Between 1999/00 and 2001/02, 'Diseases of the Circulatory System' were the leading category of hospitalizations for Haldimand and Norfolk adults aged 45-64. These hospitalizations accounted for an average of 23% of all hospitalizations for

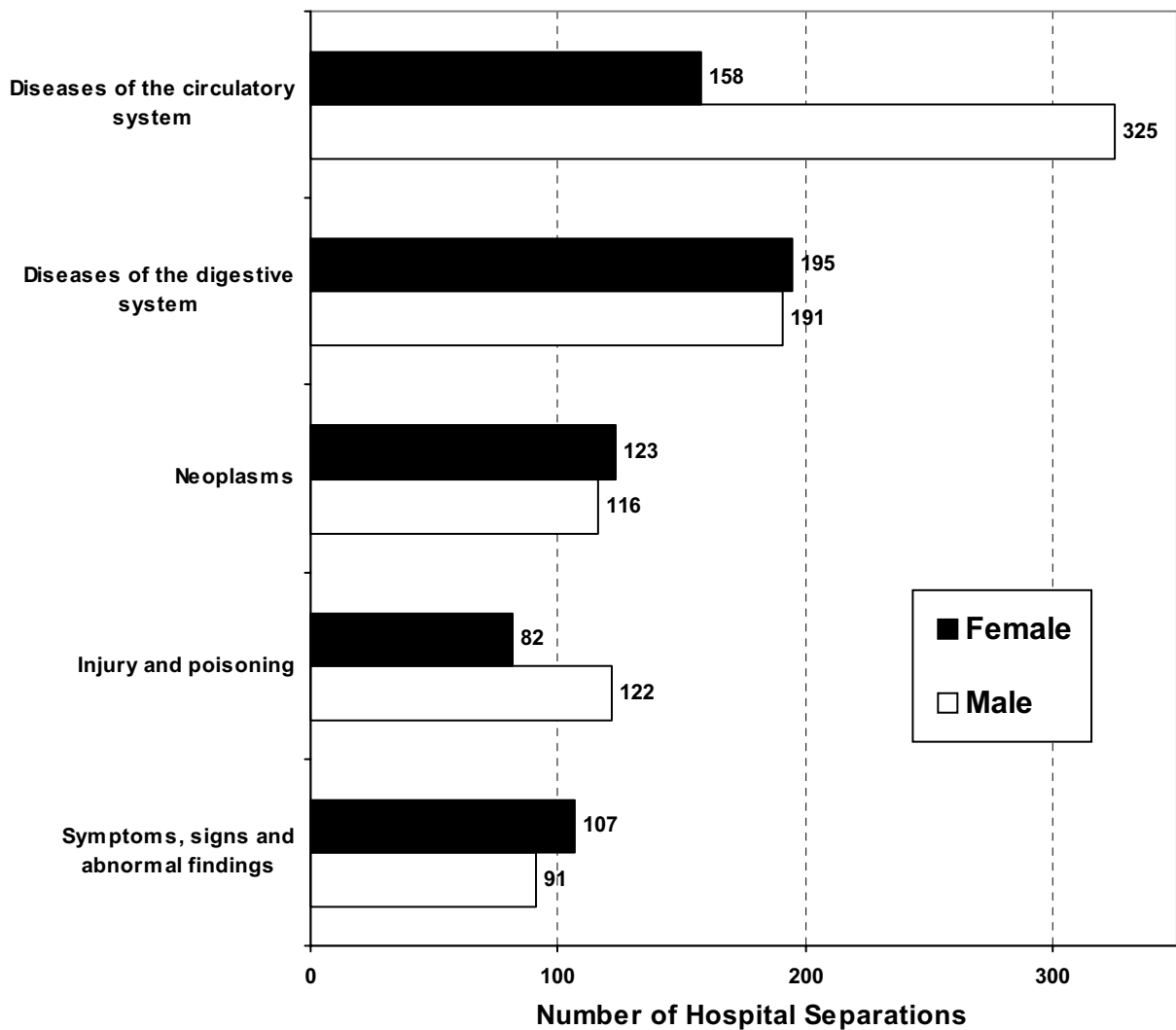
adults in this age group, with an average hospitalization rate of 13 per 1,000 45-54 years olds and 31 per 1,000 55-64 year olds.

- Ischaemic heart disease, specifically, accounted for an average of 13% of all the hospitalizations for this age group and 56% of all the hospitalizations attributed to Diseases of the Circulatory System. 'Other forms of heart disease', the fourth leading specific cause of hospitalizations for adults aged 45-64, included: cardiac dysrhythmias (50%) and heart failure (30%).
- During this three year time period, 'Diseases of the Digestive System', the second leading category of hospitalizations for adults aged 45-64, accounted for 14% of the total hospitalizations. The average rate of hospitalizations attributed to this category was 10 per 1,000 45-54 year olds and 17 per 1,000 55-64 year olds. The 'other diseases of digestive system' category, the third leading specific cause of hospitalizations for this age group which accounted for 22% of the 'Diseases of the Digestive System', was comprised primarily of the following conditions: diverticula of intestine (34%) and intestinal obstruction (24%).
- Neoplasms, the third leading cause of hospitalizations for this age group, accounted for an average of 13% of the total hospitalizations for 45-64 year olds. There were on average 9 hospitalizations per 1,000 45-54 year olds and 16 per 1,000 55-64 year olds attributed to cancers. The following malignant neoplasms accounted for 51% of the hospitalizations under this classification: trachea, bronchus and lung (11%), female breast (11%), uterine leiomyoma (8%), prostate (6%), secondary malignant neoplasm of kidney (5%), colon (5%) and secondary malignant neoplasm of lung (4%).
- On average, there were 7 hospitalizations per 1,000 45-54 year olds and 10 hospitalizations per 1,000 55-64 year olds attributed to 'Signs, Symptoms and Ill-defined Conditions'. This category accounted for an average of 9% of the total hospitalizations for adults aged 45-64. Dyspnoea and respiratory abnormalities accounted for 46% of hospitalizations in this category. Another 30% of this category was accounted by various general symptoms (15%) and symptoms involving the abdomen and pelvis (15%).
- 'Injury and Poisoning' the fifth leading category of hospitalizations for adults aged 45-64 accounted for an average of 8% of the total hospitalizations for this age group. The average rate of hospitalizations attributed to this category was at 7 per 1,000 45-54 year olds and 9 per 1,000 55-64 year olds. Complications of surgical and medical procedures accounted for 36% of the hospitalizations classified under this category. Specifically, complications of surgical and medical procedures (42%) and postoperative shock (44%). The most common fractures in this classification of hospitalizations, included: ankle (9%), radius and ulna (4%), ribs, sternum, larynx and trachea (3%), and neck of femur (3%).



Figure 3.13

**Five Leading Classifications of Hospital Separations, for Adults Aged 45-64, by Sex, Haldimand and Norfolk Residents, 2002/03**



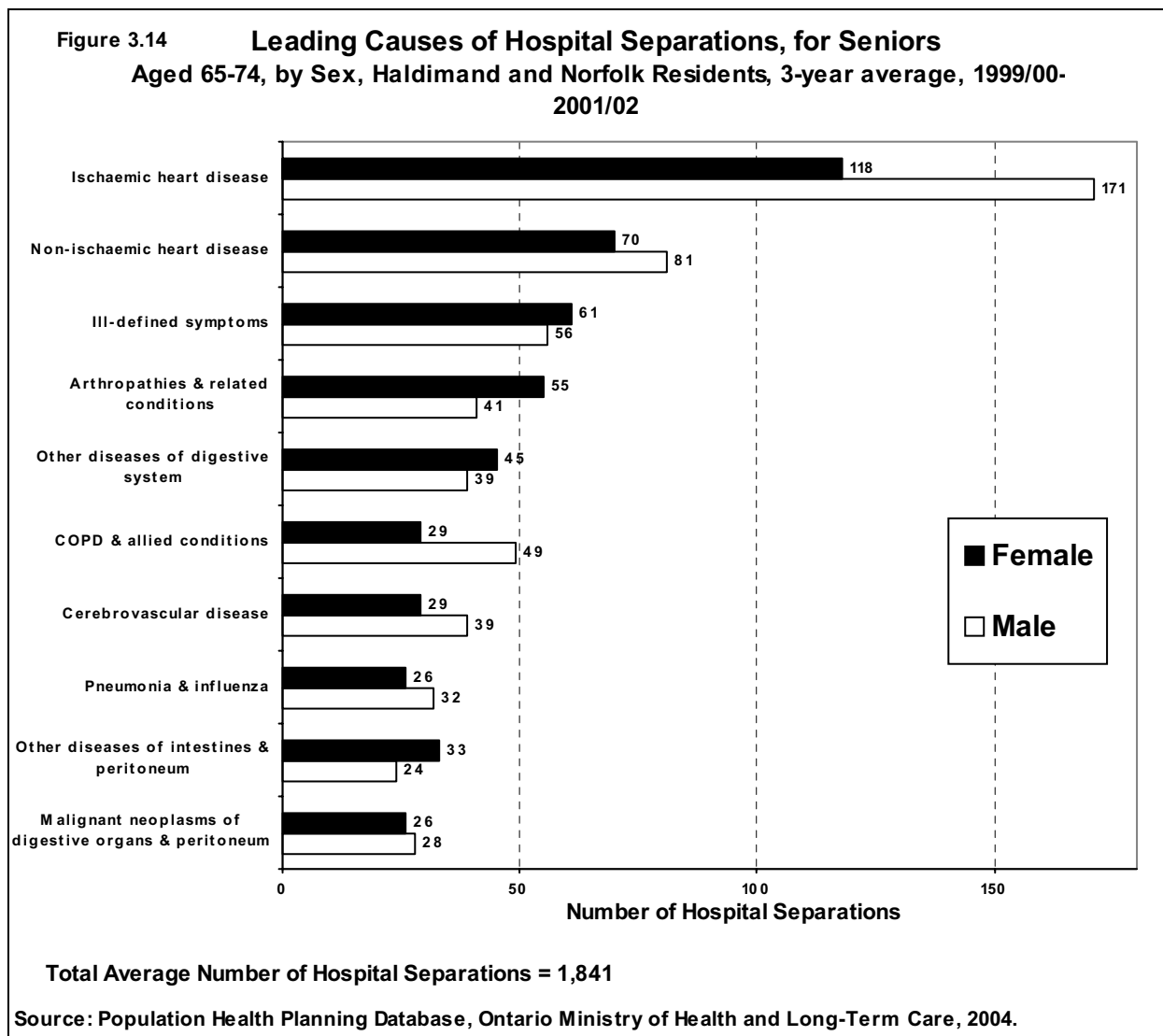
**Total Average Number of Hospital Separations = 2,420**

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

Table 3.14: Top 5 Leading Major Classifications of Hospitalizations, for Seniors aged 65-74, Haldimand and Norfolk (HN), 3-year average, 1999/00-2001/02.

Average Number Average Proportion	Diseases of the Circulatory System	Neoplasms	Diseases of the Digestive System	Diseases of the Respiratory System	Diseases of the Musculoskeletal System and Connective Tissue
<b>Males (Total average number = 960)</b>					
<b>Avg. #</b>	329	114	96	101	58
<b>Avg. %</b>	34.3%	11.9%	10.0%	10.5%	6.0%
<b>Age-specific rate</b>	80.3	27.9	23.3	24.6	14.2
<b>Females (Total average number = 881)</b>					
<b>Avg. #</b>	244	101	115	65	80
<b>Avg. %</b>	27.7%	11.5%	13.1%	7.4%	9.1%
<b>Age-specific rate</b>	53.1	22.1	25.0	14.1	17.3
<b>Total average hospitalizations for seniors 65-74</b>	573 31.1%	216 11.7%	210 11.4%	166 9.0%	138 7.5%

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.



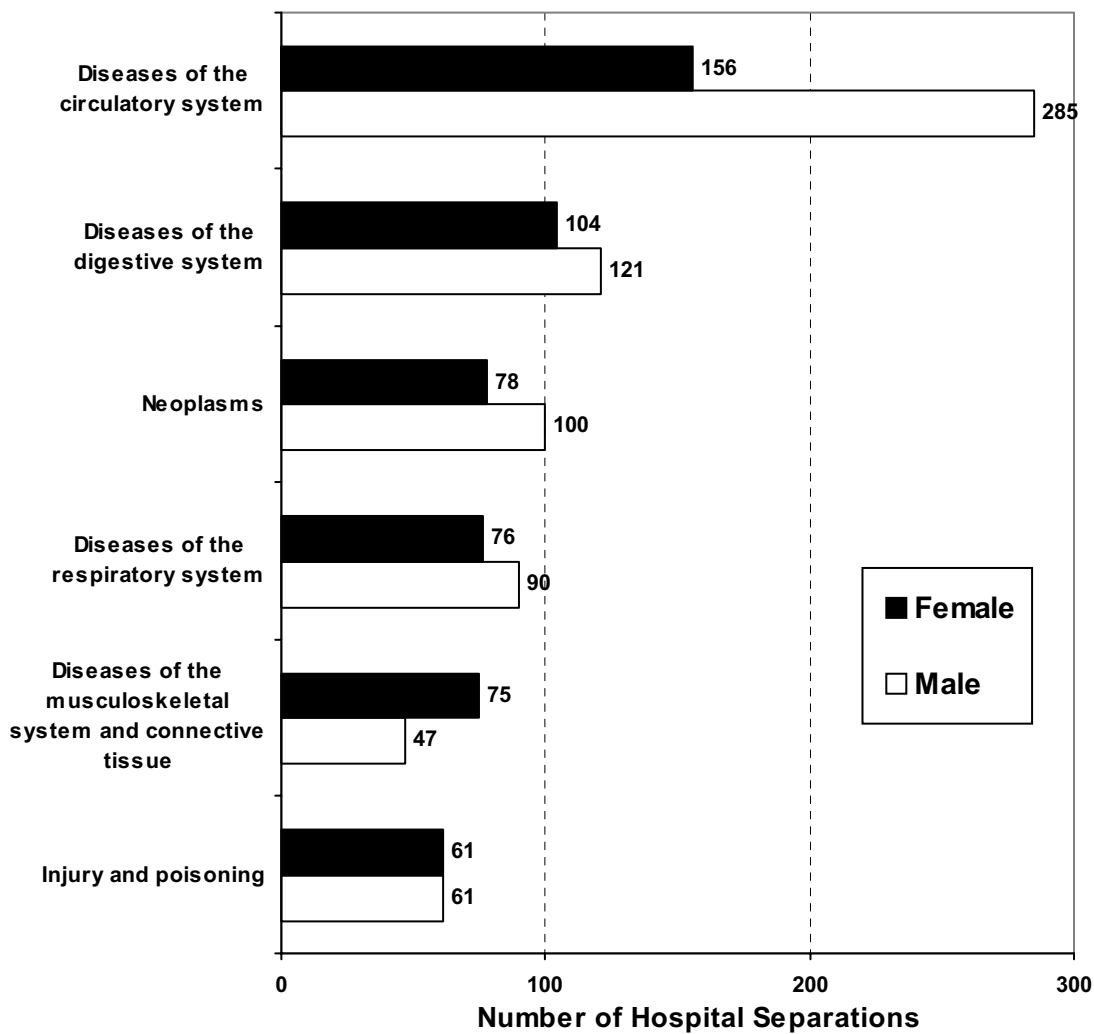
### Key Findings:

- Between 1999/00 and 2001/02, 'Diseases of the Circulatory System' were the leading category of hospitalizations for Haldimand and Norfolk seniors aged 65-74 and accounted for an average of 31% of all hospitalizations for this age group. The average rate of hospitalizations attributed to this disease category was 66 per 1,000 seniors aged 65-74.
- Ischaemic heart disease, specifically, accounted for an average of 16% of all the hospitalizations for this age group and 50% of all the hospitalizations attributed to 'Diseases of the Circulatory System'. Non-ischaemic heart disease and cerebrovascular disease accounted for another 26% and 12% of the hospitalizations classified under this category, respectively. Namely, on average, the leading specific causes included: acute myocardial infarction (100), various forms of chronic ischaemic heart disease (85), acute and subacute forms of ischaemic heart disease

(77), heart failure (68), cardiac dysrhythmias (58) and acute but ill-defined cerebrovascular disease (31).

- There were on average 25 hospitalizations per 1,000 seniors aged 65-74 attributed to Neoplasms. Cancers, in total, accounted for an average of 12% of the total hospitalizations for this age group. On average each year, 54% (117) of the hospitalizations in this category were attributed to the following malignant neoplasms: trachea, lung and bronchus (36), colon (23), prostate (18), female breast (17), bladder (12) and secondary malignant neoplasm of lung (11).
- During this three-year time period, 'Diseases of the Digestive System', the third leading category of hospitalizations, accounted for an average of 11% of all hospitalizations for seniors aged 65-75. There were on average 24 hospitalizations per 1,000 65-74 year olds attributed to this disease category. The main specific causes included: cholelithiasis (16%), diverticula of intestine (9%), intestinal obstruction (8%), gastrointestinal haemorrhage (8%), noninfective gastroenteritis (6%), inguinal hernia (6%) and hernia of abdominal cavity (6%).
- 'Diseases of the Respiratory System', the fourth leading category of hospitalizations for seniors aged 65-74, accounted for 9% of the total hospitalizations for this age group. On average, there were 19 hospitalizations per 1,000 seniors aged 65-74 attributed to this disease category each year. Chronic airways obstruction (36%), pneumonia (21%) and bronchopneumonia (11%) accounted for over two-thirds of the hospitalizations classified under this category.
- 'Diseases of the Musculoskeletal System and Connective Tissue', the fifth leading category of hospitalizations for seniors aged 65-74 accounted for an average of 7% of the total hospitalizations for this age group. There were on average 16 hospitalizations per 1,000 65-74 years olds attributed to this category. Osteoarthritis and allied disorders accounted for 64% of the hospitalizations classified under this category.
- Dyspnoea and respiratory abnormalities (43%) and various general symptoms (27%) accounted for the majority of the 'ill defined symptoms', the third leading specific cause of hospitalizations for this age group.

**Figure 3.15 Six Leading Classifications of Hospital Separations, for Seniors Aged 65-74, by Sex, Haldimand and Norfolk Residents, 2002/03**



**Total Average Number of Hospital Separations = 1,639**

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

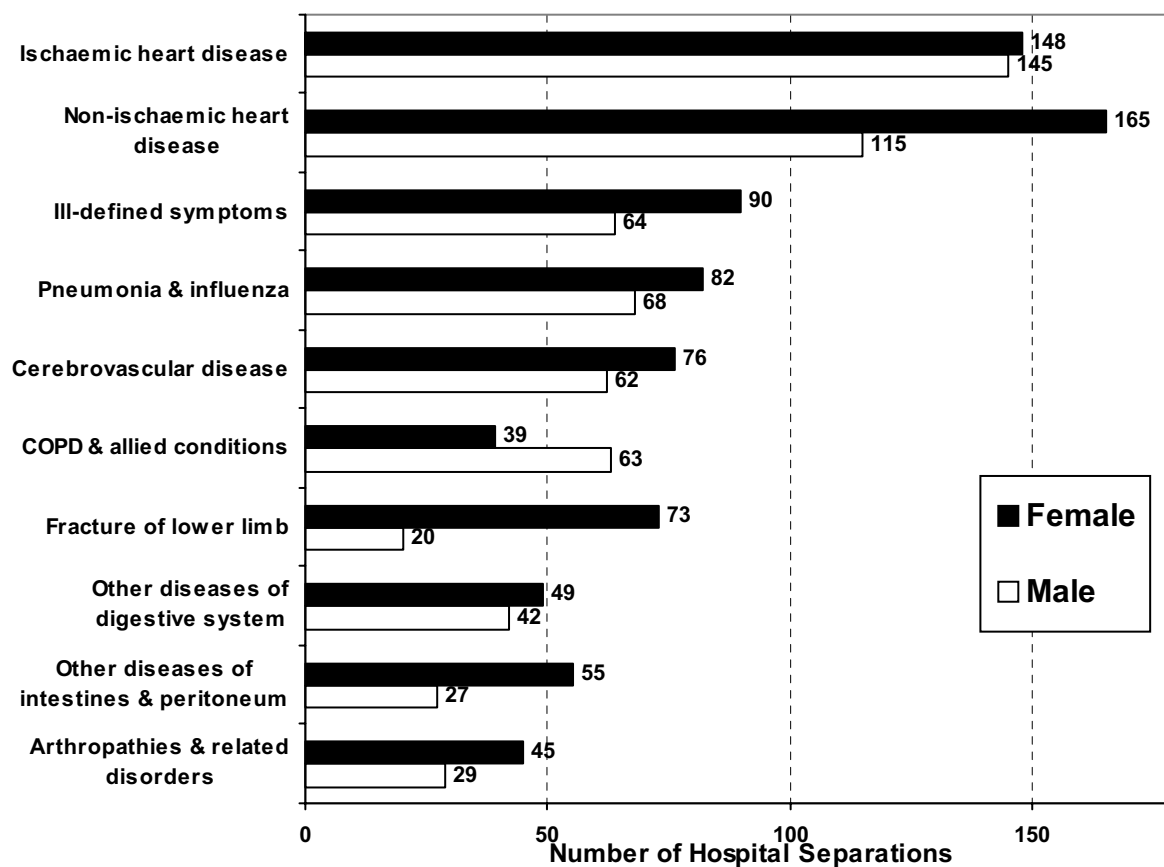
**Table 3.15: Top 6 Leading Major Classifications of Hospitalizations, for Seniors Aged 75+, Haldimand and Norfolk (HN) Residents, 3-year average, 1999/00-2001/02.**

Average Number Average Proportion	Diseases of the Circulatory System	Diseases of the Respiratory System	Diseases of the Digestive System	Injury and poisoning	Neoplasms
<b>Males (Total average number = 1,101)</b>					
<b>Avg. #</b>	359	152	104	78	109
<b>Avg. %</b>	32.6%	13.8%	9.4%	7.1%	9.9%
<b>Age-specific rate</b>					
75-84	130.7	55.6	40.7	28.8	37.6
85+	204.8	84.6	46.5	42.7	71.4
<b>Females (Total average number = 1,370)</b>					
<b>Avg. #</b>	428	136	148	150	107
<b>Avg. %</b>	31.2%	9.9%	10.8	10.9%	7.8%
<b>Age-specific rate</b>					
75-84	94.8	29.1	32.9	31.1	26.6
85+	148.6	50.2	50.8	58.2	28.2
<b>Total average hospitalizations for seniors 75+</b>	787 31.8%	288 11.7%	252 10.2%	228 9.2%	215 8.7%

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

Figure 3.16

**Leading Causes of Hospital Separations, for Seniors**  
Aged 75 and older, by Sex, Haldimand and Norfolk Residents, 3-year average, 1999/00-2001/02



Total Average Number of Hospital Separations = 2,471

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

### Key Findings:

- Between 1999/00 and 2001/02, 'Diseases of the Circulatory System' were the leading category of hospitalizations for Haldimand and Norfolk seniors aged 75+ and accounted for an average of 32% of all hospitalizations for this age group. There were on average 110 hospitalizations per 1,000 seniors aged 75-84 and 165 hospitalizations per 1,000 85+ year olds attributed to heart disease.
- Ischaemic heart disease accounted for an average of 12% of all the hospitalizations for this age group and 37% of all the hospitalizations attributed to 'Diseases of the Circulatory System'. While, non-ischaemic disease accounted for 11% of all the hospitalizations for seniors aged 75+ and 36% of all the hospitalizations attributed to

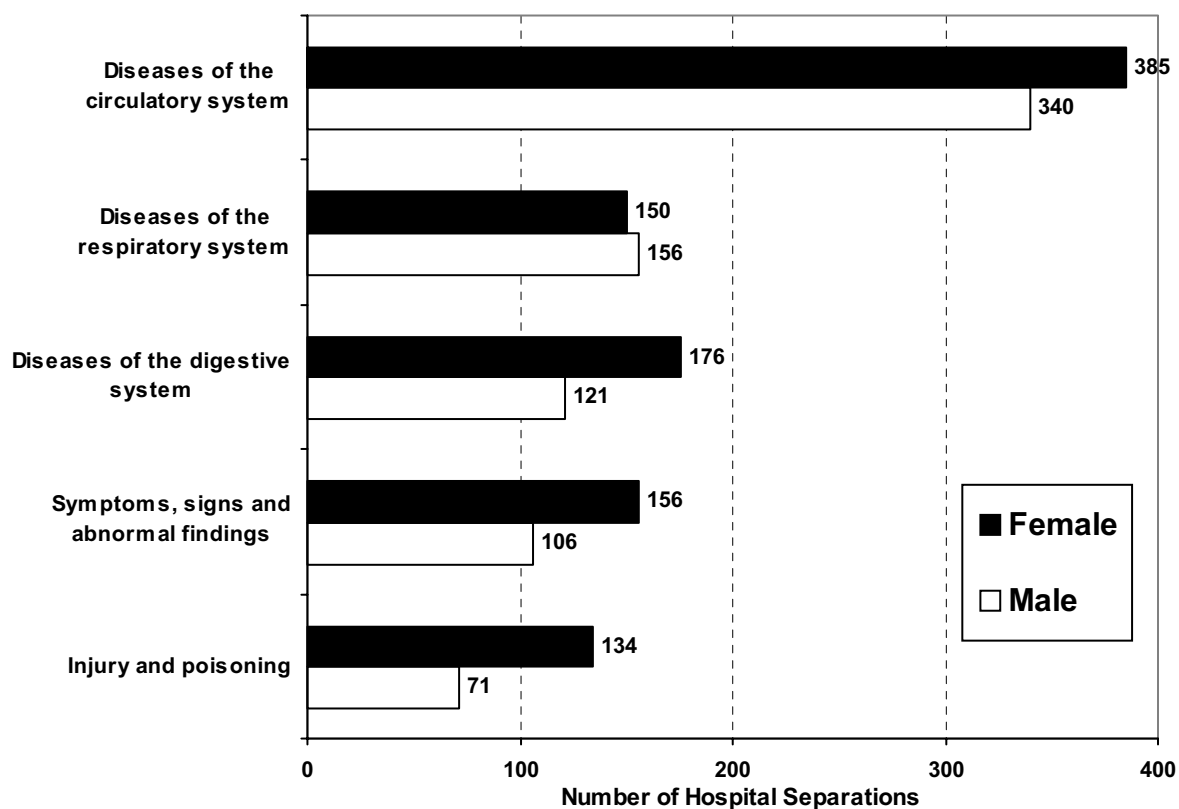
this broad category of diseases. Namely, each year on average, the specific leading causes included: heart failure (165), acute myocardial infarction (116), cardiac dysrhythmias (91), various forms of chronic ischaemic heart disease (81), acute but ill-defined cerebrovascular disease (77), and, acute and subacute forms of ischaemic heart disease (71).

- During this three-year period, 'Diseases of the Respiratory System', the second leading category of hospitalizations for seniors aged 75+, accounted for 12% of the total hospitalizations for this age group. On average, the rates of hospitalizations for respiratory diseases for those aged 75-84 and 85+ were 40 and 60 per 1,000, respectively. Over three-quarters of the hospitalizations in this category were attributed to pneumonia (31%), chronic airways obstruction (30%) and bronchopneumonia (17%).
- On average, there were 36 hospitalizations per 1,000 seniors aged 75-84 and 50 per 1,000 those aged 85+ attributed to 'Diseases of the Digestive System'. This category accounted for an average of 10% of the total hospitalizations for seniors aged 75+. The main conditions included: gastrointestinal haemorrhage (13%), intestinal obstruction (12%), cholelithiasis (12%), diverticula of intestine (9%) and inguinal hernia (6%).
- 'Injury and Poisoning', the fourth leading category of hospitalizations for seniors aged 75+, accounted for 9% of the total hospitalizations for this age group. On average, there were 30 hospitalizations per 1,000 seniors aged 75-84 and 54 per 1,000 85+ year olds attributed to injuries. Complications of medical and surgical procedures accounted for 22% of the hospitalizations in this category. Specifically, mechanical complications of cardiac devices (47%), complications of procedures (36%) and various body systems complications (14%). Of the total hospitalizations classified under this category, the most common fractures included: neck of femur (34%), pelvis (4%), humerus (4%) and vertebral column (4%).
- The fifth leading category of hospitalizations for seniors aged 75+, 'Neoplasms' accounted for 9% of the total hospitalizations for this age group. The average hospitalizations rates, for this category, for those aged 75-84 and 85+ were 31 and 41 per 1,000, respectively. Each year, on average, 51% (111) of the hospitalizations in this category were attributed to the following malignant neoplasms: colon (24), trachea, lung and bronchus (19), female breast (19), bladder (18), prostate (18) and rectosigmoid junction (13).
- Dyspnoea and respiratory abnormalities (25%), various general symptoms (37%), and symptoms involving the abdomen and pelvis (15%) accounted for 77% of the 'Ill defined symptoms' category, the third leading specific cause of hospitalizations for seniors aged 75+.



Figure 3.17

**Five Leading Classifications of Hospital Separations, for Seniors  
Aged 75 and older, by Sex,  
Haldimand and Norfolk Residents, 2002/03**



**Total Average Number of Hospital Separations = 2,531**

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

## 4.0 MORTALITY 1998-2001

**Table 4.1: Number of Deaths, Residents of Haldimand and Norfolk Counties, 1998-2001.**

Calendar Year	Males	Females	Total
1998	412	417	829
1999	451	407	858
2000	460	463	923
2001	442	480	923

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

**Table 4.2: Deaths by Age Group, Residents of Haldimand and Norfolk Counties, 1998-2001.**

Age Group	1998	1999	2000	2001
0-9	8	9	9	12
10-19			10	6
20-44	24	26	30	32
45-64	101	131	126	124
65-74	181	182	180	172
75+	515	510	568	577
<b>Total</b>	<b>829</b>	<b>858</b>	<b>923</b>	<b>923</b>

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

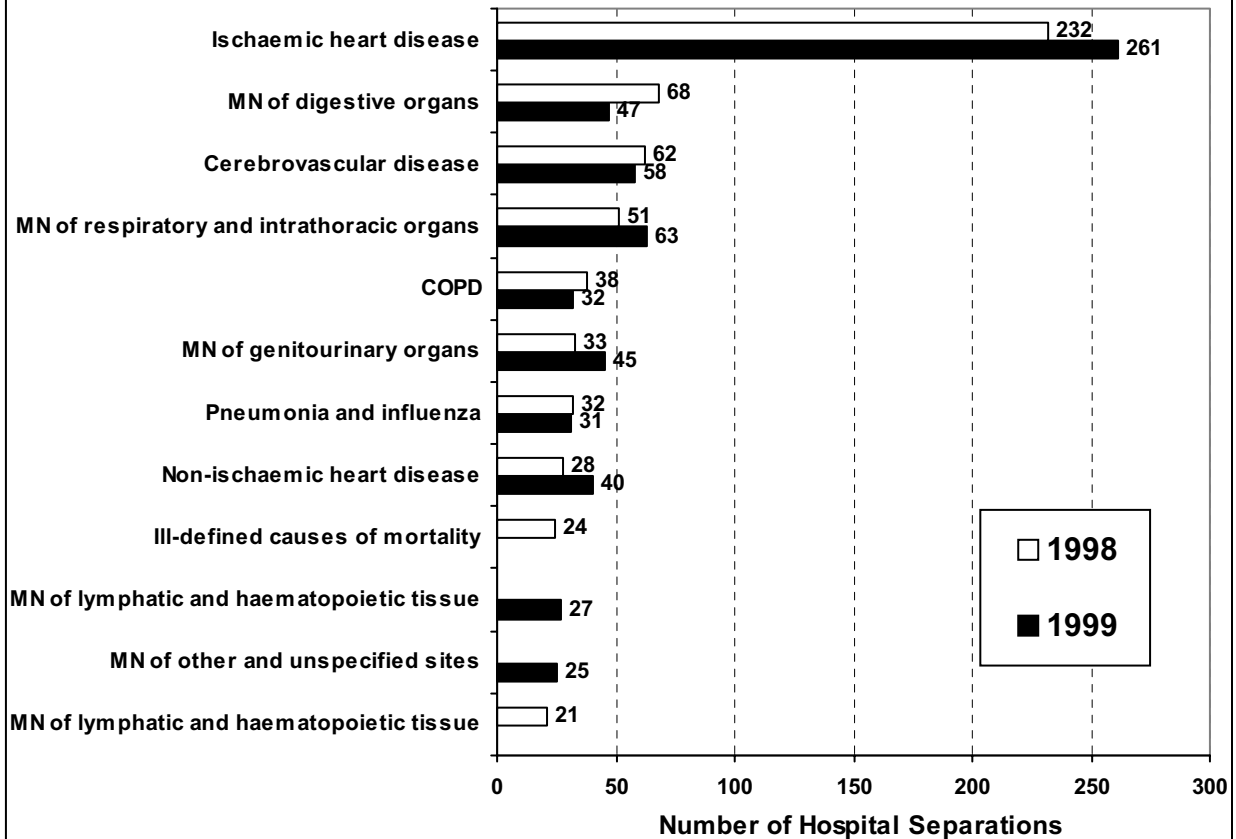
**Table 4.3 : Number and Proportion of Births by County of Birth, Residents of Haldimand and Norfolk Counties, 1998-2001.**

<b>County where birth took place</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
<b>Haldimand and Norfolk Counties</b>	704 84.9%	677 78.9%	714 77.4%	729 79.0%
<b>Brant County</b>	9 1.1%	9 1.0%	13 1.4%	16 1.7%
<b>Middlesex</b>	16 1.9%	16 1.9%	34 3.7%	24 2.6%
<b>Oxford</b>	24 2.9%	41 4.8%	41 4.4%	37 4.0%
<b>Hamilton</b>	59 7.1%	70 8.2%	73 7.9%	63 6.8%
<b>Simcoe</b>	5 0.6%	12 1.4%	16 1.7%	26 2.8%
<b>Other</b>	12 1.4%	33 3.8%	32 3.5%	28 3.0%
<b>TOTAL</b>	<b>829</b>	<b>858</b>	<b>923</b>	<b>923</b>

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

Figure 4.1

**Ten Leading Causes of Death, by Major Classification,  
Residents of Haldimand and Norfolk Counties, 1998-1999**



Total Number of Deaths in 1998 = 829

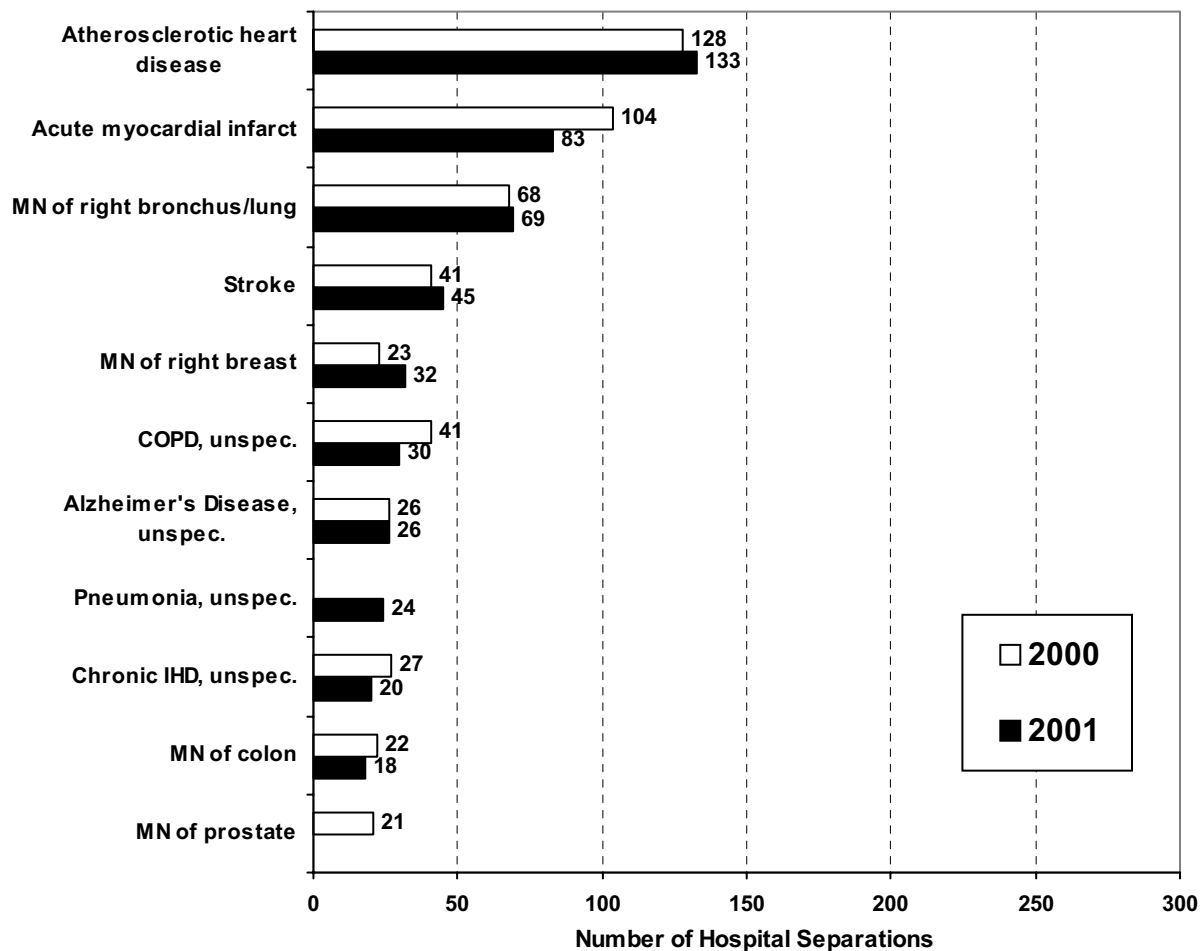
Total Number of Deaths in 1999 = 858

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

Notes: "MN" – malignant neoplasm.

Figure 4.2

### Ten Leading Causes of Death, by Major Classification, Residents of Haldimand and Norfolk Counties, 2000-2001



Total Number of Deaths in 2000 = 923

Total Number of Deaths in 2001 = 923

Source: Population Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2004.

Notes: "MN" – malignant neoplasm. "IDH" – ischaemic heart disease. "unspec." – unspecified.